cm3/1000 strokes	: 5.0	control lever position degree : - 1
Check tolerance cm3/1000s.	: 9.0	Rated speed rpm : 1120
		Rack travel in mm: 16.50 Tolerance mm: +- 1.30
Rated speed rpm	: 300	FULL LOAD DELIVERY AT FULL LOAD STO
Rack travel in m	m: 5.50	T TOLL LOAD DELIVERY AT FOLL LOAD STOR
Tolerance mm		Rated speed rpm : 600
Del. quantity		+ Aneroid pressure
cm3/1000 strokes	: 16.5	+ hPa : 1300
Tolerance		+ Del. quantity
cm3/1000 strokes		+ cm3/1000 strokes : 275.5
Check tolerance		† Tolerance
cm3/1000s.	: +- 6.0	+ cm3/1000 strokes : + 1.0
Spreed Tolerance		+ Check tolerance + cm3/1000S. : + 4.0
cm3/1000 strokes	• 80	+ Cm3/10005. : +- 4.0 + Spreed
Check tolerance	. 0.0	Tolerance
cm3/1000s.	: 12.0	+ cm3/1000 strokes : 5.0
		- Check tolerance
(B) SETTING OF I		+ cm3/1000s. : 9.0
GUIDE SLEEVE TRA	WE!	CONTROL LEVER
GOINT OFFERE INV	VCC	†
		control lever
Rated speed rpm		position degree : 52.0
Rated speed rpm guide sleeve	: 700	
Rated speed rpm guide sleeve travel mm	: 700 : 4.55	position degree : 52.0
Rated speed rpm guide sleeve travel mm	: 700 : 4.55 : +- 0.25	position degree : 52.0 tolerance degree : +- 4.0 control lever position degree : 117.0
Rated speed rpm guide sleeve travel mm Tolerance mm	: 700 : 4.55 : + 0.25	position degree : 52.0 tolerance degree : +- 4.0 control lever
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	: 700 : 4.55 : +- 0.25 : 1050	position degree : 52.0 tolerance degree : +- 4.0 control lever position degree : 117.0 tolerance degree : +- 4.0
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm	: 700 : 4.55 : +- 0.25 : 1050 : 7.70	position degree : 52.0 tolerance degree : +- 4.0 control lever position degree : 117.0 tolerance degree : +- 4.0 RATED SPEED
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm	: 700 : 4.55 : +- 0.25 : 1050	position degree : 52.0 tolerance degree : +- 4.0 control lever position degree : 117.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 12.60
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 700 : 4.55 : + 0.25 : 1050 : 7.70 : + 0.10	position degree : 52.0 tolerance degree : +- 4.0 control lever position degree : 117.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 12.60 Rated speed rpm : 1000
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 700 : 4.55 : + 0.25 : 1050 : 7.70 : + 0.10	position degree : 52.0 tolerance degree : +- 4.0 control lever position degree : 117.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 12.60
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	: 700 : 4.55 : + 0.25 : 1050 : 7.70 : + 0.10 : 300	position degree : 52.0 tolerance degree : +- 4.0 control lever position degree : 117.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 12.60 Rated speed rpm : 1000 Tolerance 1/min : +- 5
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm	: 700 : 4.55 : + 0.25 : 1050 : 7.70 : + 0.10 : 300 : 0.75	position degree : 52.0 tolerance degree : +- 4.0 control lever position degree : 117.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 12.60 Rated speed rpm : 1000
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm	: 700 : 4.55 : + 0.25 : 1050 : 7.70 : + 0.10 : 300 : 0.75 : + 0.25	position degree : 52.0 tolerance degree : +- 4.0 control lever position degree : 117.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 12.60 Rated speed rpm : 1000 Tolerance 1/min : +- 5 rack travel mm : 4.00
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Tolerance mm	: 700 : 4.55 : + 0.25 : 1050 : 7.70 : + 0.10 : 300 : 0.75 : + 0.25	position degree : 52.0 tolerance degree : +- 4.0 control lever position degree : 117.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 12.60 Rated speed rpm : 1000 Tolerance 1/min : +- 5 rack travel mm : 4.00 Rated speed rpm : 1125 Tolerance 1/min : +- 15
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 700 : 4.55 : + 0.25 : 1050 : 7.70 : + 0.10 : 300 : 0.75 : + 0.25 : 500	position degree : 52.0 tolerance degree : +- 4.0 control lever position degree : 117.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 12.60 Rated speed rpm : 1000 Tolerance 1/min : +- 5 rack travel mm : 4.00 Rated speed rpm : 1125 Tolerance 1/min : +- 15 rack travel mm : 0.50
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 700 : 4.55 : + 0.25 : 1050 : 7.70 : + 0.10 : 300 : 0.75 : + 0.25 : 500 : 3.45	position degree : 52.0 tolerance degree : + 4.0 control lever position degree : 117.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 12.60 Rated speed rpm : 1000 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1125 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 700 : 4.55 : + 0.25 : 1050 : 7.70 : + 0.10 : 300 : 0.75 : + 0.25 : 500	position degree : 52.0 tolerance degree : +- 4.0 control lever position degree : 117.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 12.60 Rated speed rpm : 1000 Tolerance 1/min : +- 5 rack travel mm : 4.00 Rated speed rpm : 1125 Tolerance 1/min : +- 15 rack travel mm : 0.50
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Tolerance mm	: 700 : 4.55 : + 0.25 : 1050 : 7.70 : + 0.10 : 300 : 0.75 : + 0.25 : 500 : 3.45 : + 0.25	position degree : 52.0 tolerance degree : + 4.0 control lever position degree : 117.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 12.60 Rated speed rpm : 1000 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1125 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 700 : 4.55 : + 0.25 : 1050 : 7.70 : + 0.10 : 300 : 0.75 : + 0.25 : 500 : 3.45 : + 0.25	position degree : 52.0 tolerance degree : + 4.0 control lever position degree : 117.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 12.60 Rated speed rpm : 1000 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1125 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	: 700 : 4.55 : + 0.25 : 1050 : 7.70 : + 0.10 : 300 : 0.75 : + 0.25 : 500 : 3.45 : + 0.25 : 1165	position degree : 52.0 tolerance degree : + 4.0 control lever position degree : 117.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 12.60 Rated speed rpm : 1000 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1125 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 700 : 4.55 : + 0.25 : 1050 : 7.70 : + 0.10 : 300 : 0.75 : + 0.25 : 500 : 3.45 : + 0.25 : 1165 : 9.55	position degree : 52.0 tolerance degree : + 4.0 control lever position degree : 117.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 12.60 Rated speed rpm : 1000 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1125 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 700 : 4.55 : + 0.25 : 1050 : 7.70 : + 0.10 : 300 : 0.75 : + 0.25 : 500 : 3.45 : + 0.25 : 1165 : 9.55 : + 0.25	position degree : 52.0 tolerance degree : + 4.0 control lever position degree : 117.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 12.60 Rated speed rpm : 1000 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1125 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1230 LOW IDLE
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 700 : 4.55 : + 0.25 : 1050 : 7.70 : + 0.10 : 300 : 0.75 : + 0.25 : 500 : 3.45 : + 0.25 : 1165 : 9.55 : + 0.25	position degree : 52.0 tolerance degree : +- 4.0 control lever position degree : 117.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 12.60 Rated speed rpm : 1000 Tolerance 1/min : +- 5 rack travel mm : 4.00 Rated speed rpm : 1125 Tolerance 1/min : +- 15 rack travel mm : 0.50 Tolerance mm : 0.50 Rated speed rpm : 1230

control lever position degree tolerance degree	: 17.0 : ← 4.0	+ Pressure hPa + rack travel mm + Tolerance mm	: 500 : 0.90 : + 0.10
Setting point w/o	out bumper spring	Start interlock	
Rated speed rpm	: 100	Rated speed rpm Rated speed rpm	
CRT mm min.	: > 9.20	Check	
Testing:		speed 1/min Check	: > 80
Rated speed rpm rack travel mm Tolerance mm	: 300 : 5.50 : +- 0.10	speed 1/min	
Rated speed rpm	: 325	+ FUEL DELIVERY CHA	IKACIEKISIICS
TORQUE CONTROL		Aneroid pressure	: 1300
Rated speed rpm	: 600	Rated speed rpm	
rack travel mm	: 14.25	+ Del. quantity	
Tolerance mm		cm3/100C strokes Tolerance	
Rated speed rpm rack travel mm	: 950 · 13.75	+ cm3/1000 strokes + Check tolerance	: +- 2.0
Tolerance mm	: + 0.05	cm3/1000s.	: +- 5.0
Rated speed rpm	: 750	+ Tolerance	
rack travel mm	: 14.25	cm3/1000 strokes	: 8.0
Tolerance mm	: +- 0.05	+ Check tolerance + cm3/1000s.	: 12.0
Rated speed rpm rack travel mm	: 840	+	,210
rack travel mm Tolerance mm	: 13.90 : +- 0.10	Ananaid procesure	
rocerance mm	: +- 0.10	+ Aneroid pressure + hPa	: 1300
		Rated speed rpm	
ANEROID/ALTITUDE		+ Del. quantity	2/7.0
COMPENSATOR TEST		+ cm3/1000 strokes + Tolerance	: 267.0
		+ cm3/1000 strokes	: +- 2.0
SETTING		+ Check tolerance	: +- 5.0
Rated speed rpm	: 500	+ cm3/1000s. + Spreed	: +- 5.0
Pressure hPa	: 1300	+ Tolerance	
rack travel mm	: 14.25 : +- 0.05	cm3/1000 strokes	: 8.0
Tolerance mm	: +- 0.05	+ Check tolerance + cm3/1000s.	: 12.0
Rated speed rpm	: 500	+	
Pressure hPa	: -	Aneroid pressure	
MEASUREMENT		+ hPa	: -
Rated speed rpm	: 500	+ Rated speed rpm + Del. quantity	: 500
	7/0	+ cm3/1000 strokes	: 146.5
Pressure hPa rack travel mm	: 760 : 2.25	+ Tolerance + cm3/1000 strokes	: +- 1.0
Tolerance mm	: +- 0.15	+ Check tolerance	1.0
		- cm3/1000s.	: +- 4.0

Spreed

Tolerance

cm3/1000 strokes : 5.0

Check tolerance

cm3/1000s. : 9.0

STARTING FUEL DELIVERY

Rated speed rpm : 100

Del. quantity

cm3/1000 strokes : 236.0

Tolerance

cm3/1000 strokes : \leftarrow 10.0

Check tolerance

cm3/1000s. : +- 14.0

LOW IDLE

Rated speed rpm : 300

Rack travel in mm : 5.50

Tolerance mm : +- 0.10

Del. quantity cm3/1000 strokes : 16.5

Tolerance

cm3/1000 strokes : +- 3.0

Check tolerance

: +- 6.0 cm3/1000s.

Spreed

Tolerance

cm3/1000 strokes : 8.0

Check tolerance

: 12.0 cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 21.07.97 Edition : ISO 4113 Test oil

Combination No. : 0 400 846 258

Injection pump

Pump designation : PES6A90D410RS2293Z EP type number : 0 410 896 037

Governor

Governer design. : RQV300...1425AB740L

Governer no. : 0 420 212 037

Cust. part No. :

Customer-spec. information Customer : MB-NFZ

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C 40 Tolerance °C : +- 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

173.5 Tolerance bar : +- 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

BASIC SETTING

Del. quantity cm3/1000 strokes : 74.5

Tolerance

cm3/1000 strokes : +- 0.5

Check tolerance cm3/1000s. : +- 2.5

Spreed

Tolerance

cm3/1000 strokes : 3.0

Check tolerance

cm3/1000s. 4.5

Rated speed rpm : 300

(B) SETTING OF INJECTION PUMP WITH GOVERNOR

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1375

Aneroid pressure

hPa

Del. quantity cm3/1000 strokes : 74.5 Tolerance cm3/1000 strokes : +- 0.5 Check tolerance cm3/1000s.: +- 2.5 Spreed Tolerance cm3/1000 strokes : 3.0 Check tolerance cm3/1000s. 4.5 RATED SPEED 4.00 rack travel mm : rack travel mm : 4.00 LOW IDLE Setting point w/out bumper spring Rated speed rpm : 100 Testing: rack travel mm : 2.00 Start interlock 100 Rated speed rpm : > Check speed 1/min :> 80 STARTING FUEL DELIVERY Rated speed rpm : 100 LOW IDLE

End of test specification sheet

Rated speed rpm :

300

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 22.07.97 Test oil : ISO 4113

Combination No. : 0 400 846 443

Injection pump

Pump designation : PES6A90D410RS2293Z EP type number : 0 410 896 037

Governor

Governer design. : RQV300...1400AB1066

: -1DL

Governer no. : 0 420 214 251

Cust. part No. :

Customer—spec. information Customer : MB—NFZ Motor : OM352A Power KW : 126.0

TEST BENCH REQUIREMENTS

Inlet line : 1.2

Test oil inlet

temp. °C : 40 Tolerance °C : + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : +- 1.5

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.50

Check

tolerance $^{\circ}NW$: + 0.75

BASIC SETTING

Rated speed rpm : 1400

Rack travel in mm : 12.45

Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 74.5

Tolerance

cm3/1000 strokes : +- 0.5

Check tolerance

cm3/1000s. : +- 2.5

Spreed

Tolerance +	Tolerance mm : +- 1.30
cm3/1000 strokes : 3.0	Tolerance mm : +- 1.30
Charle to Language	FILL LOAD DELTHERY AT FULL LOAD OTOD
Check tolerance + cm3/1000s. : 4.5	FULL LOAD DELIVERY AT FULL LOAD STOP
1	Rated speed rpm : 1400
	Aneroid pressure
700	hPa : 700
Rated speed rpm : 300	Del. quantity cm3/1000 strokes : 74.5
Rack travel in mm: 9.00	Tolerance
Tolerance mm : + 0.10	cm3/1000 strokes : +- 0.5
Del. quantity	Check tolerance
cm3/1000 strokes : 12.0 + Tolerance +	cm3/1000s. : +- 2.5 Spreed
cm3/1000 strokes : +- 3.0	Tolerance
Check tolerance	cm3/1000 strokes : 3.0
cm3/1000s. : + 5.0 +	Check tolerance
Spreed +	cm3/1000s. : 4.5
cm3/1000 strokes : 2.0	
Check tolerance	
cm3/1000s. : 4.0	CONTROL LEVER
I	control lever
(B) SETTING OF INJECTION PUMP	position degree : 114.0
WITH GOVERNOR +	tolerance degree : +- 4.0
<u> </u>	RATED SPEED
GUIDE SLEEVE TRAVEL	rack travel mm : 11.40
t	Rated speed rpm : 1445
Rated speed rpm : 1500	Tolerance 1/min : +- 5
guide sleeve + travel mm : 8.55 +	rack travel mm : 4.00
Tolerance mm : + 0.05	Rated speed rpm : 1595
700	Tolerance 1/min : +- 15
Rated speed rpm : 300 + guide sleeve +	rack travel mm : 0.50
travel mm : 1.05	Tolerance mm : +- 0.50
Tolerance mm : + 0.25	Rated speed rpm : 1750
Rated speed rpm : 500 +	
Rated speed rpm : 500 + guide sleeve +	
travel mm : 2.55	
Tolerance mm : + 0.25	LOW IDLE
Rated speed rpm : 750	
guide sleeve	control lever
travel mm : 4.20 +	position degree : 76.0
Tolerance mm : + 0.10	tolerance degree : +- 4.0
	Setting point w/out bumper spring
GUIDE SLEEVE POSITION	D
1	Rated speed rpm : 100
control lever	CRT mm min. : > 10.50
position degree : -1	-
Rated speed rpm : 1500	Testing:
Rack travel in mm: 16.50	Rated speed rpm : 300

rack travel mm Tolerance mm	: 9.00 : + 0.10	‡
Rated speed rpm	: 625	‡
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 1400 : 12.45 : + 0.05	† † †
Rated speed rpm rack travel mm Tolerance mm	: 700 : 13.75 : + 0.05	† † †
Rated speed rpm rack travel mm Tolerance mm		† † †
Rated speed rpm rack travel mm Tolerance mm		† † †
ANEROID/ALTITUDE COMPENSATOR TEST		† † †
SETTING		+
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 700 : 13.75 : +- 0.05	T + + +
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 12.35 : + 0.05	+++++++++++++++++++++++++++++++++++++++
MEASUREMENT		+
Rated speed rpm	: 500	Ì
Pressure hPa rack travel mm Tolerance mm	: 225 : 12.70 : + 0.10	+
Pressure hPa rack travel mm Tolerance mm	: 350 : 13.25 : +- 0.05	+++++
Start interlock		†
Rated speed rpm Rated speed rpm	: > 100 : < 220	1
Check speed 1/min	: > 80	+

Check speed 1/min	: <	240	
FUEL DELIVERY CHAP	RACTE	RISTICS	
Aneroid pressure hPa Rated speed rpm Del. quantity	:	700 700	•
cm3/1000 strokes Tolerance	:	76.0	
cm3/1000 strokes Check tolerance	: +-	2.0	
cm3/1000s.	: +-	4.5	
Aneroid pressure hPa	:	_	•
Rated speed rpm Del. quantity	:	500	
cm3/1000 strokes Tolerance	:	56.0	
cm3/1000 strokes	: +-	1.0	
Check tolerance cm3/1000s.	: +-	3.0	
Rated speed rpm rack travel mm Tolerance mmi Del. quantity cm3/1000 strokes	: +-	100 15.60 0.20 78.0	
Tolerance cm3/1000 strokes	•	5.0	
Check tolerance cm3/1000s.	: +-	8.0	
LOW IDLE	:	300	
Rack travel in mm Tolerance mm	: +-	9.00 0.10	
Del. quantity cm3/1000 strokes	:	12.0	
Tolerance cm3/1000 strokes	: +-	3.0	
Check tolerance cm3/1000s. Spreed	: +-	5.0	
Tolerance cm3/1000 strokes	:	2.0	

Check tolerance cm3/1000s.	:	4.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 13.06.95 : ISO 4113

Combination No. : 0 400 866 194

Injection pump

Pump designation : PES6A100D320/3RS2763

EP type number : 0 410 806 006

Governor

Governer design. : RSV415...1175A0C2190

: -69R

Governer no.

: 0 420 233 308

Cust. part No. : 3921135

Customer-spec. information Customer : CDC Motor : 6 CT : 129.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C Tolerance *C : +- 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 bar Tolerance bar : + 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : +- 1.0

Prestroke mm : 2.85 Tolerance mm : + 0.05

Check

: +- 0.10 tolerance mm

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Start of delivery blocking

*NW after s.o.d. : 11.00 Tolerance : \leftarrow 0.50

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1175

Rack travel in mm : 10.45

Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes	: 99.5	control lever
Tolerance cm3/1000 strokes	: + 1.0	position degree : 110.0 tolerance degree : +- 4.0
		RATED SPEED
Check tolerance cm3/1000s.	: + 3.0	rack travel mm : 9.40 Rated speed rpm : 1245 Tolerance 1/min : +- 5
Spreed	+	
Tolerance cm3/1000 strokes	: 4.0	rack travel mm : 4.00 Rated speed rpm : 1310 Tolerance 1/min : +- 5
Check tolerance cm3/1000s.	: 6.5	rack travel mm : 0.85 Tolerance mm : +- 0.55 Rated speed rpm : 1400
Rack travel in mm Tolerance mm	: 5.20 : + 0.10	rack travel mm : 4.00 Rated speed rpm : 1315 Tolerance 1/min : +- 15
(B) SETTING OF INJUNION WITH GOVERNOR	ECTION PUMP	LOW IDLE
GUIDE SLEEVE POSIT	ION	control lever position degree : 86.0 tolerance degree : +- 4.0
control lever position degree Rated speed rpm	: - 3 : 800	Control lever difference Grad : 24.0 tolerance degree : +- 4.0
Rack travel in mm Tolerance mm		Setting point w/out bumper spring
FULL LOAD DELIVERY		Rated speed rpm : 415 rack travel mm : 4.70 Tolerance mm : +- 0.10
Rated speed rpm Aneroid pressure	: 1175	Rated speed rpm : 100
hPa	:	CRT mm min. : > 19.00
Del. quantity cm3/1000 strokes	: 99.5	Testing:
Tolerance cm3/1000 strokes	: +- 1.0	Rated speed rpm : 415
Check tolerance cm3/1000s. Spreed	: + 3.0	rack travel mm : 5.20 Tolerance mm : +- 0.10
Tolerance cm3/1000 strokes	: 4.0	TORQUE CONTROL
Check tolerance	: 6.5	Rated speed rpm : 1175 rack travel mm : 10.45 Tolerance mm : +- 0.05
CONTROL LEVER		Rated speed rpm : 800 rack travel mm : 10.80

Tolerance mm : + 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : -Rated speed rpm : 800

Del. quantity

cm3/1000 strokes : 103.0

Tolerance

cm3/1000 strokes : +- 2.0

Check tolerance

cm3/1000s. : +- 4.0

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : \pm 0.50

Del. quantity

cm3/1000 strokes : 160.0

Tolerance

cm3/1000 strokes : \leftarrow 10.0

Check tolerance

cm3/1000s. : +- 15.0

LOW IDLE

Rack travel in mm : 5.20 Tolerance mm : + 0.10

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 22.07.97 Edition Test oil : ISO 4113

Combination No. : 0 402 076 773

Injection pump

Pump designation : PES6P100A320LS3342

EP type number : 0 412 006 710

Governor

Governer design. : RSV415...1100P8A595

: 0 421 833 461 Governer no.

Cust. part No. : 1824625091

Customer-spec. information Customer : NAVISTAR : DT-530 Motor

Power KW : 168.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C 40 Tolerance °C 2.0

: 1 417 413 076 Overflow valve

Inlet press. bar : 2.8 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 bar Tolerance bar 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0 x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : +- 1.0

Prestroke mm 3.00 : +- 0.05 Tolerance mm

Check

: +- 0.10 tolerance mm

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

: 1-5-3-6-2-Firing order

: 4

Phasing : 0-60-120-180-240

: -300

: +- 0.50 Tolerance

Check

tolerance °NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm: 13.25 Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 146.5

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

: +- 3.0 cm3/1000s.

Spreed

Tolerance cm3/1000 strokes : 8.0 - Check tolerance	Check tolerance : 12.0
cm3/1000s. : 12.0	
	CONTROL LEVER
	control lever
Rated speed rpm : 415	<pre>position degree : 106.0 tolerance degree : + 6.0</pre>
Rack travel in mm: 5.50	+
Tolerance mm : + 0.10	RATED SPEED
Del. quentity - cm3/1000 strokes : 24.5 -	rack travel mm : 12.20 Rated speed rpm : 1150
Tolerance -	Tolerance 1/min : +- 5
cm3/1000 strokes : +- 2.0	- Ĉiγeck
Check tolerance	speed 1/min : +- 10
cm3/1000s. : +- 4.5 Spreed	t + rack travel mm : 4.00
Tolerance	Rated speed rpm : 1200
cm3/1000 strokes : 4.0	Tolerance 1/min : + 5
Check tolerance	+ Check
cm3/1000s. : 6.5	speed 1/min : + 10
	rack travel mm : 0.85
(B) SETTING OF INJECTION PUMP	Tolerance mm : +- 0.55
WITH GOVERNOR	Rated speed rpm : 1300
	† + rack travel mm : 4.00
	Rated speed rpm : 1205
GUIDE SLEEVE POSITION	Tolerance 1/min : +- 5
•	+ Check + speed 1/min : +- 10
control lever	+ speed 1/min : +- 10
position degree : - 3	+
Rated speed rpm : 800	†
Rack travel in mm : 0.50	LOW IDLE
Tolerance mm : + 0.20	+
governor spring	+ - control lever
pre-tension -	position degree : 79.0
click setting x : 3.00	tolerance degree : + 6.0
•	
FULL LOAD DELIVERY AT FULL LOAD STOP	+ Setting point w/out bumper spring
	Rated speed rpm : 100
Rated speed rpm : 1100	10.00
Aneroid pressure : 1200	CRT mm min. : > 19.00
Del. quantity	Testing:
cm3/1000 strokes : 146.5	+
Tolerance	Rated speed rpm : 415
cm3/1000 strokes : +- 1.0 Check tolerance	+ rack travel mm : 5.50 + Tolerance mm : +- 0.10
cm3/1000s. : +- 3.0	Total affice min : T- 0.10
Spreed	
Tolerance	TORQUE CONTROL
cm3/1000 strokes : 8.0	Rated speed rpm : 1100 rack travel mm : 13.25
	- caus cravo mm * 13/3

Tolerance mm	: + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 800 : 14.20 : + 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1200 : 14.20 : +- 0.05
Rated speed rpm Pressure hPa	: 500
rack travel mm Tolerance mm	8.90 + 0.20
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 590 : 12.80 : ← 0.20
Pressure hPa rack travel mm Folerance mm	: 270 : 10.20 : +- 0.05
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity	: 1200 : 800
cm3/1000 strokes Tolerance	: 172.0
cm3/1000 strokes Check tolerance	: +- 2.0
cm3/1000s.	: +- 4.0
Aneroid pressure	• _
hPa Rated speed rpm Del. quantity	500
cm3/1000 strokes Tolerance	: 78.5
cm3/1000 strokes	: +- 2.0

STARTING FUEL DELI	VERY	
Rated speed rpm rack travel mm Tolerance mm Del. quantity	: 100 : 20.50 : +- 0.50	
cm3/1000 strokes Tolerance	: 160.0	
cm3/1000 strokes Check tolerance	: +- 20.0	
cm3/1000s.	: +- 25.0	
LOW IDLE		
LOW INCL		
Rated speed rpm	: 415	
Rack travel in mm Tolerance mm		
Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes	: 5.50 : +- 0.10	
Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: 5.50 : +- 0.10	
Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 5.50 : +- 0.10 : 24.5	
Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed	: 5.50 : + 0.10 : 24.5 : + 2.0	
Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes	: 5.50 : + 0.10 : 24.5 : + 2.0	
Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000S. Spreed Tolerance	: 5.50 : +- 0.10 : 24.5 : +- 2.0 : +- 4.5	

End of test specification sheet

Check tolerance cm3/1000s. : +- 4.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 22.07.97 Edition : ISO 4113 Test oil

Combination No. : 0 402 076 774

Injection pump

Pump designation : PES6P100A320LS3342 EP type number : 0 412 006 710

Governor

Governer design. : RSV415...1100P8A596

Governer no. : 0 421 833 462

Cust. part No. : 1824624091

Customer-spec. information Customer : NAVISTAR Motor : DT-530 : 187.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C : 40
Tolerance °C : ★ 2.0

Overflow valve : 1 417 413 076

Inlet press. bar : Inlet press. bar : 2.8
Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

: 208.5 Tolerance bar : +- 1.5

Test Lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 17.0 Tolerance bar : +- 1.0

Prestroke mm : 3.00 Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 0-60-120-180-240 : -300 Phasing

Tolerance : **←** 0.50

Check

tolerance *NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 12.60 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 130.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

: +- 3.0 cm3/1000s.

Spreed

Tolerance cm3/1000 strokes : 8.0	+ Check tolerance - cm3/1000s. : 12.0
Check tolerance cm3/1000s. : 12.0	İ
	CONTROL LEVER
Data damanda wa 145	+ control lever
Rated speed rpm : 415	<pre>position degree : 108.0 tolerance degree : +- 6.0</pre>
Rack travel in mm : 5.50	+
Tolerance mm : + 0.10	RATED SPEED
Del. quantity	+ rack travel mm : 11.60
cm3/1000 strokes : 24.5 Tolerance	+ Rated speed rpm : 1150 + Tolerance 1/min : +- 5
cm3/1000 strokes : +- 2.0	+ Check
Check tolerance	+ speed 1/min : + 10
cm3/1000s. : +- 4.5	+
Spreed	+ rack travel mm : 4.00
Tolerance cm3/1000 strokes : 4.0	+ Rated speed rpm : 1200
Check tolerance	Tolerance 1/min : +- 5 + Check
cm3/1000s. : 6.5	speed 1/min : +- 10
	t rack travel mm : 0.85
(B) SETTING OF INJECTION PUMP	Tolerance mm : +- 0.55
WITH GOVERNOR	+ Rated speed rpm : 1300
	+
	+ rack travel mm : 4.00
CUIDE CLEEVE DOCLETON	+ Rated speed rpm : 1205
GUIDE SLEEVE POSITION	+ Tolerance 1/min : +- 5 + Check
	+ speed 1/min : +- 10
control lever	+
position degree : - 3	+
Rated speed rpm : 800	1
Rack travel in mm : 0.50 Tolerance mm : +- 0.20	LOW IDLE
governor spring	control lever
pre-tension	position degree : 80.0
click setting x : 3.50	tolerance degree : +- 6.0
FULL LOAD DELIVERY AT FULL LOAD STOP	Setting point w/out bumper spring
	Rated speed rpm : 100
Rated speed rpm : 1100 Aneroid pressure	+ CRT mm min. : > 19.00
hPa : 1200	T CK! (((())) (()) (()) (()) (()) (()) (())
Del. quantity	† Testing:
cm3/1000 strokes : 130.0	+
Tolerance	+ Rated speed rpm : 415
cm3/1000 strokes : +- 1.0	rack travel mm : 5.50 Tolerance mm : + 0.10
Check tolerance cm3/1000s. : +- 3.0	† Tolerance mm : +- 0.10
Spreed	
Tolerance	TORQUE CONTROL
cm3/1000 strokes : 8.0	+ Rated speed rpm : 1100
	+ rack travel mm : 12.60

: +- 0.05 Tolerance mm 800 Rated speed rpm : rack travel mm : 13.50 : +- 0.10 Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST SETTING 800 Rated speed rpm Pressure hPa 1200 13.50 rack travel mm : : +- 0.20 Tolerance mm Rated speed rpm : 500 Pressure hPa rack travel mm : 8.80 : +- 0.20 Tolerance mm **MEASUREMENT** : 800 Rated speed rpm 585 Pressure hPa rack travel mm 12.40 : +- 0.20 Tolerance mm : 290 : 10.00 Pressure hPa rack travel mm : : +- 0.05 Tolerance mm FUEL DELIVERY CHARACTERISTICS Aneroid pressure 1200 hPa Rated speed rpm : 800 Del. quantity cm3/1000 strokes : 155.0Tolerance cm3/1000 strokes : +-2.0 Check tolerance cm3/1000s. : +- 4.0 Aneroid pressure hPa 500 Rated speed rpm Del. quantity cm3/1000 strokes : 77.5

STARTING FUEL DELIVERY Rated speed rpm 100 rack travel mm : 21.00 : **←** 0.50 Tolerance mm Del. quantity cm3/1000 strokes : 153.0 Tolerance cm3/1000 strokes : +- 20.0Check tolerance cm3/1000s.: +- 25.0 LOW IDLE Rated speed rpm : 415 Rack travel in mm : 5.50 Tolerance mm : +- 0.10 Del. quantity cm3/1000 strokes : 24.5 Tolerance cm3/1000 strokes : +- 2.0Check tolerance : +cm3/1000s. 4.5 Spreed

4.0

6.5

End of test specification sheet

Tolerance

cm3/1000s.

cm3/1000 strokes :

Check tolerance

Tolerance

Check tolerance cm3/1000s.

 $c_{3}/1000 \text{ strokes} : +- 2.0$

: +-

4.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 22.07.97 Test oil : ISO 4113

Combination No. : 0 402 076 775

Injection pump

Pump designation : PES6P100A320LS3342 EP type number : 0 412 006 710

Governor

Governer design. : RSV415...1100P8A597

Governer no. : 0 421 833 463

Cust. part No. : 1824626091

Customer-spec. information

: NAVISTAR Customer : DT-530 Motor Power KW : 153.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C 40 Tolerance °C : +- 2.0

Overflow valve : 1 417 413 076

Inlet press. bar : 2.8 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 : **←** 1.5 Tolerance bar

Test Lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm 3.00 : +- 0.05 Tolerance mm

Check

tolerance mm : ← 0.10

Rack travel in mm: 10.50 Tolerance mm : \leftarrow 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm: 12.55

Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 128.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s.

: +- 3.0

Spreed

Tolerance cm3/1000 strokes : 8.0	Check tolerance cm3/1000s. : 12.0
Check tolerance cm3/1000s. : 12.0	CONTROL LEUED
+	CONTROL LEVER
Rated speed rpm : 415	<pre>control lever position degree : 107.5 tolerance degree : +- 6.0</pre>
Rack travel in mm: 5.60 + Tolerance mm: +- 0.10 + Del. quantity	RATED SPEED rack travel mm : 11.50
cm3/1000 strokes : 24.5 Tolerance	Rated speed rpm : 1150 Tolerance 1/min : +- 5
cm3/1000 strokes : +- 2.0 +- Check tolerance +-	Check speed 1/min : +- 10
cm3/1000s. : +- 4.5 +- Spreed	rack travel mm : 4.00
Tolerance + cm3/1000 strokes : 4.0 + cm3/1000 strokes : 4.0	Rated speed rpm : 1200 Tolerance 1/min : +- 5
Check tolerance cm3/1000s. : 6.5	Check speed 1/min : +- 10
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	rack travel mm : 0.85 Tolerance mm : +- 0.55 Rated speed rpm : 1300
	rack travel mm : 4.00 Rated speed rpm : 1205
GUIDE SLEEVE POSITION	Tolerance 1/min : +- 5 Check speed 1/min : +- 10
control lever position degree : - 3 Rated speed rpm : 800	
Rack travel in mm: 0.50 Tolerance mm: +- 0.20	LOW IDLE
governor spring pre-tension click setting x : 3.50	control lever position degree : 78.5 tolerance degree : +- 6.0
FULL LOAD DELIVERY AT FULL LOAD STOP	Setting point w/out bumper spring
Rated speed rpm : 1100 +	Rated speed rpm : 100
Aneroid pressure hPa : 1200	CRT mm min. : > 19.00
Del. quantity cm3/1000 strokes : 128.0	Testing:
Tolerance + 1.0 + Check tolerance + 1.0	Rated speed rpm : 415 rack travel mm : 5.60 Tolerance mm : ← 0.10
cm3/1000s. : +- 3.0 +-	
Tolerance cm3/1000 strokes : 8.0	TORQUE CONTROL Rated speed rpm : 1100 rack travel mm : 12.55

: **←** 0.05 Tolerance mm 008 Rated speed rpm rack travel mm 13.40 Tolerance mm : +- 0.10 ANEROID/ALTITUDE COMPENSATOR TEST SETTING 800 Rated speed rpm Pressure hPa 1200 13.40 rack travel mm : **←** 0.10 Tolerance mm Rated speed rpm 500 Pressure hPa 8.90 rack travel mm : + - 0.20Tolerance mm **MEASUREMENT** Rated speed rpm 800 510 Pressure hPa 12.20 rack travel mm Tolerance mm : + 0.20Pressure hPa 250 10.00 rack travel mm : + 0.05 Tolerance mm FUEL DELIVERY CHARACTERISTICS Aneroid pressure 1200 hPa Rated speed rpm 800 Del. quantity cm3/1000 strokes : 153.0 Tolerance cm3/1000 strokes : +-2.0 Check tolerance cm3/1000s.: +- 4.0 Aneroid pressure 500 Rated speed rpm : Del. quantity cm3/1900 strokes : 78.5 Tolerance

STARTING FUEL DELIVERY Rated speed rpm 100 rack travel mm : 20.50 : +- 0.50 Tolerance mm Del. quantity cm3/1000 strokes : 150.0 Tolerance cm3/1000 strokes : +- 20.0Check tolerance cm3/1000s.: +- 25.0 LOW IDLE Rated speed rpm : 415 Rack travel in mm: 5.60 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 24.5 Tolerance cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000s.: +-4.5 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. 6.5

End of test specification sheet

cm3/1000 strokes : +-

Check tolerance cm3/1000s.

2.0

4.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 17.07.97 Edition : ISO 4113 Test oil

Combination No. : 0 402 196 709

Injection pump

Pump designation: PES6P120A720RS3354

EP type number : 0 412 026 781

Governor

Governer design. : RE30

Governer no. :

Cust. part No. : RE 67771

Customer-spec. information Customer : DEERE : 6081HRW06 Power KW : 149.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C Tolerance °C : +- 2.0

Overflow valve : 2 417 413 077

Inlet press. bar : 2.0 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 bar Tolerance bar : +- 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x Length mm : 600

REMARKS

Pump-specific values in Section (B) must be observed!

(A) INJECTION PUMP SETTINGS

No basic setting.

Setting of constant delivery

under Section C.

BEGINNING OF DELIVERY

Test pressure bar: 17.0 Tolerance bar : + 1.0

Prestroke mm : 3.60 Tolerance mm : + 0.05 Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

Start of delivery mark

*NW after s.o.d. : 8.50 Tolerance : + 0.50Check

tolerance $^{\circ}NW$: +- 0.75

Barrei no. : 1

Beginning of delivery differende

and maximum rack

travel : 15.00
Tolerance mm : +- 0.50 Difference ° CS : 2.50

(B) POSITIONER TESTING Warm-up time: 3 minutes at n=600 min-1, Uact = 2.5 VTESTING & SETTING RACK TRAVEL SENSOR **POSITION** Engine speed min-1: Setting point (P, R and H pump) Uact V 3,100 13.00 CRT mm Tolerance mm : +/- 0.05Check : +/- 0.10 tolerance mm Check value (P, R and H pump) 1.700 Uact V : CRT mm 6.15 : +/- 0.25 Tolerance mm Check : +/- 0.30tolerance mm Setting point (qmuq M) 3.100 Uact V 12.50 CRT mm : +/- 0.05 Tolerance mm Check : +/- 0.10tolerance mm Check value (M pump) Uact V 1.700 5.50 CRT mm : +/- 0.25 Tolerance mm Check : +/- 0.30 tolerance mm Stop position : Value with Uact V deenergised adjusting magnet and control rod in stop position. 0.75 CRT mm

: +/- 0.25

ENGINE-SPEED SENSOR (All P and R pumps not H and M pumps) Test with control rod in stop position Engine speed min-1: Amplitude V 1.4 Tolerance V : +/- 0.6 Check : +/- 1.20 tolerance V Engine speed min-1: 600 Difference Amplitude to Amplitude V : max.1.4 (C) INJECTION PUMP WITH POSITIONER TEST POINT V1 Rated speed rpm 1100 Uact V 2.880 Del. quantity cm3/1000 strokes : 140.0 Tolerance cm3/1000 strokes : +-Check tolerance cm3/1000s.: +-3.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. 9.0 FUEL DELIVERY CHARACTERISTICS Rated speed rpm 700 Uact V 2.880 Del. quantity cm3/1000 strokes : 141.5 Tolerance cm3/1000 strokes : +-Check tolerance cm3/1000s. : +-6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. 12.0 425 Rated speed rpm Uact V 1.610

tolerance mm : $\pm - 0.35$

Check

Tolerance mm

Del. quantity			
cm3/1000 strokes	:	22.0	
Tolerance			
cm3/1000 strokes	: +	3.0	
Check tolerance			
cm3/1000s.	: +-	6.0	
Spreed			
Tolerance			
cm3/1000 strokes	:	6.0	
Check tolerance			
cm3/1000s.	:	10.0	
TEST POINT L1			

TEST POINT LT

Rated speed rpm 425 Uact V 1.610 Tolerance Volt : +- 0.060 Check tolerance

Volt : **←** 0.060

STARTING FUEL DELIVERY

100 Rated speed rpm Uact V 4.600 Del. quantity cm3/1000 strokes : 105.0 Tolerance cm3/1000 strokes : + 10.0Check tolerance

cm3/1000s.: + 13.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 17.07.97 Test oil : ISO 4113

Combination No. : 0 402 196 710

Injection pump

Pump designation : PES6P12OA72ORS3354 EP type number : 0 412 026 781

Governor

Governer design. : RE30

Governer no. :

Cust. part No. : RE 67448

Customer-spec. information
Customer : DEERE
Motor : 6081AT002
Power KW : 135.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C : 40 Tolerance °C : +- 2.0

Overflow valve : 2 417 413 077

Inlet press. bar : 2.0 Tolerance bar : +- 0.1

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter : 3.0
x length mm : 600

REMARKS

Pump-specific values in Section (B) must be observed!

(A) INJECTION PUMP SETTINGS

No basic setting.

Setting of constant delivery

under Section C.

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm : 3.60
Tolerance mm : + 0.05
Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Start of delivery mark

*NW after s.o.d. : 7.00 Tolerance : +- 0.50 Check

tolerance °NW : +- 0.75

Barrel no. : 1

Beginning of delivery differende

and maximum rack

travel : 15.00
Tolerance mm : +- 0.50
Difference CS : 2.50

(B) POSITIONER TESTING Warm-up time: 3 minutes at n=600 min-1, Uact = 2.5 VTESTING & SETTING RACK TRAVEL SENSOR **POSITION** Engine speed min-1: Setting point (P, R and H pump) 3.100 Uact V CRT mm 13.00 Tolerance mm : +/- 0.05 Check : +/- 0.10 tolerance mm Check value (P, R and H pump) Uact V 1.700 6.15 CRT mm : +/- 0.25 Tolerance mm Check : +/- 0.30tolerance mm Setting point (m pump) 3.100 Uact V 12.50 CRT mm : +/- 0.05 Tolerance mm Check tolerance mm : +/- 0.10 Check value (M pump) 1.700 Uact V 5.50 CRT mm : +/- 0.25 Tolerance mm Check : +/- 0.30 tolerance mm Stop position Uact V : Value with deenergised adjusting magnet and control rod in stop position. 0.75 CRT mm

: +/- 0.25

ENGINE-SPEED SENSOR (All P and R pumps not H and M pumps) Test with control rod in stop position Engine speed min-1: 60 Amplitude V 1.4 Tolerance V : +/- 0.6 Check tolerance V : +/- 1.20 Engine speed min-1: 600 Difference Amplitude to Amplitude V : max.1.4 (C) INJECTION PUMP WITH POSITIONER TEST POINT V1 1100 Rated speed rpm : Uact V 2.880 Del. quantity cm3/1000 strokes : 140.0 Tolerance cm3/1000 strokes : +- 1.0Check tolerance cm3/1000s. 3.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000S.FUEL DELIVERY CHARACTERISTICS Rated speed rpm 700 Uact V 2.880 Del. quantity cm3/1000 strokes : 141.5 Tolerance cm3/1000 strokes : +-Check tolerance cm3/1000s. : +--6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. 12.0 425 Rated speed rpm : 1.610 Uact V

tolerance mm : \pm +/- 0.35

Check

Tolerance mm

Del. quantity cm3/1000 strokes : 22.0 Tolerance 3.0 cm3/1000 strokes : +-Check tolerance cm3/1000s.6.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. 10.0

TEST POINT L1

Rated speed rpm 425 Uact V 1.610 Tolerance Volt : + 0.060Check tolerance Volt : +- 0.060

STARTING FUEL DELIVERY

Rated speed rpm 100 Uact V 4.600 Del. quantity cm3/1000 strokes : 105.0 Tolerance

cm3/1000 strokes : + 10.0Check tolerance

cm3/1000s.: + 13.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 17.07.97 Edition Test oil : ISO 4113

Combination No. : 0 402 196 711

Injection pump

Pump designation : PES6P120A720RS3354 EP type number : 0 412 026 781

Governor

Governer design. : RE30

Governer no. : 0 421 890 029

Cust. part No. : RE 68148

Customer-spec. information Customer : DEERE Motor : 6081HDW02 Power KW : 163.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C Tolerance °C : +- 2.0

Overflow valve : 2 417 413 077

Inlet press. bar : Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 bar Tolerance bar : +- 1.5

Test Lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x length mm : 600

REMARKS

Pump-specific values in Section (B) must be observed!

(A) INJECTION PUMP SETTINGS

No basic setting.

Setting of constant delivery

under Section C.

BEGINNING OF DELIVERY

Test pressure bar: 17.0 Tolerance bar : + 1.0

Prestroke mm : 3.60 Tolerance mm : + 0.05 Check tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

Start of delivery blocking

*NW after s.o.d. : 7.75 Tolerance : \leftarrow 0.50 Check

tolerance $^{\circ}NW$: \leftarrow 0.75

Barrel no. : 1

Beginning of delivery differende

and maximum rack

: 15.00 travel Tolerance mm : + 0.50 Difference * CS : 2.50

(B) POSITIONER TESTING Warm-up time: 3 minutes at n=600 min-1, Uact = 2.5 VTESTING & SETTING RACK TRAVEL SENSOR POSITION Engine speed min-1: Setting point (P, R and H pump)

3.100 Uact V 13.00 CRT mm Tolerance mm : +/- 0.05

Check

: +/- 0.10 tolerance mm

Check value (P, R and H pump)

1,700 Uact V CRT mm 6.15 : +/- 0.25 Tolerance mm Check

: +/- 0.30 tolerance mm

Setting point (qmuq M)

3.100 Uact V 12.50 CRT mm Tolerance mm : +/~ 0.05 Check

: +/- 0.10 tolerance mm

Check value (qmuq M)

Uact V 1.700 CRT mm 5.50 Tolerance mm : +/- 0.25 Check : +/- 0.30

tolerance mm

Stop position

: Value with deenergised adjusting magnet

and control rod in stop position.

0.75 CRT mm : +/- 0.25 Tolerance mm

Check

Uact V

tolerance mm : $\pm 1/-0.35$

ENGINE-SPEED SENSOR (All P and R pumps not H and M pumps)

Test with control rod in stop position

Engine speed min-1: 60 1.4 Amplitude V Tolerance V : +/- 0.6 Check : +/- 1.20 tolerance V

Engine speed min-1: 600

Difference Amplitude to

Amplitude V : max.1.4

(C) INJECTION PUMP WITH POSITIONER

TEST POINT V1

Rated speed rpm : 1100 Uact V 2.880

Del. quantity

cm3/1000 strokes : 140.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s.

Spreed

Tolerance

cm3/1000 strokes : 5.0

Check tolerance

cm3/1000s.

FUEL DELIVERY CHARACTERISTICS

700 Rated speed rpm : Uact V 2.880 Del. quantity cm3/1000 strokes : 141.5 Tolerance cm3/1000 strokes : +--3.0 Check tolerance cm3/1000s. 6.0

Spreed Tolerance

8.0 cm3/1000 strokes :

Check tolerance

cm3/1000s.12.Ü

425 Rated speed rpm 1.610 Uact V

Del. quantity 22.0 cm3/1000 strokes : Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s.6.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. 10.0 : TEST POINT L1 Rated speed rpm 425 1.610 Uact V

Tolerance Volt

: + 0.060

Check tolerance

: + 0.060Volt

STARTING FUEL DELIVERY

Rated speed rpm 100 4,600 Uact V Del. quantity cm3/1000 strokes : 105.0 Tolerance

cm3/1000 strokes : \leftarrow 10.0

Check tolerance

cm3/1000s. : +- 13.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 17.07.97 Test oil : ISO 4113

Combination No. : 0 402 196 712

Injection pump

Pump designation : PES6P110A320RS3386 EP type number : 0 412 016 757

Governor

Governer design. : RE30

Governer no. : 0 421 890 044

Cust. part No. : RE 69563

Customer—spec. information
Customer : DEERE
Motor : 6068HDW55

Power KW : 127.0

TEST BENCH REQUIREMENTS

Inlet ' .ne : 4.2

Test oil inlet

temp. *C : 40 Tolerance *C : +- 2.0

Overflow valve : 2 417 413 077

Inlet press. bar : 2.0 Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x length mm : 600

REMARKS

Pump-specific values in Section (B) must be observed!

(A) INJECTION PUMP SETTINGS

No basic setting.

Setting of constant delivery

under Section C.

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm : 3.60
Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Start of delivery blocking

*NW after f.o.d. : 6.50 Tolerance : +- 0.50

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

Barrel no. : 1

Beginning of delivery differende

and maximum rack

travel : 15.00
Tolerance mm : + 0.50
Difference °CS : 2.00

(B) POSITIONER TESTING Warm-up time: 3 minutes at n=600 min-1, Uact = 2.5 VTESTING & SETTING RACK TRAVEL SENSOR POSITION Engine speed min-1: Setting point (P, R and H pump) 3,100 Uact V 13.00 CRT mm : +/- 0.05 Tolerance mm Check : +/- 0.10 tolerance mm Check value (P, R and H pump) 1.700 Uact V : 6.15 CRT mm : +/- 0.25 Tolerance mm Check : +/- 0.30 tolerance mm Setting point (quruq M) 3.100 Uact V 12.50 CRT mm : +/- 0.05 Tolerance mm Check : +/- 0.10 tolerance mm Check value (dmuq M) 1.700 Uact V 5.50 CRT mm Tolerance mm : +/- 0.25 Check : +/- 0.30 tolerance mm Stop position : Value with Uact V deenergised adjusting magnet

and control rod in

stop position. 0.75

: +/- 0.25

ENGINE-SPEED SENSOR (All P and R pumps not H and M pumps) Test with control rod in stop position Engine speed min-1: 60 Amplitude V 1.4 Tolerance V : +/- 0.6 Check : +/- 1.20 tolerance V Engine speed min-1: 600 Difference Amplitude to Amplitude V : max.1.4 (C) INJECTION PUMP WITH POSITIONER TEST POINT V1 Rated speed rpm 1000 : Uact V 3.180 Del. quantity cm3/1000 strokes : 142.0 Tolerance cm3/1000 strokes : +- 1.0Check tolerance cm3/1000s.: +-Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s.9.0 FUEL DELIVERY CHARACTERISTICS 600 Rated speed rpm : Uact V 3.180 Del. quantity cm3/1000 strokes : 143.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. : +-6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance 12.0 cm3/1000s.400 Rated speed rpm 1.590 Uact V

tolerance mm : ± -0.35

CRT mm

Check

Tolerance mm

Del. quantity cm3/1000 strokes : 16.5 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s.6.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. 10.0 : TEST POINT L1

Rated speed rpm : 400
Uact V : 1.590
Tolerance Volt : + 0.060
Check tolerance

Volt : ← 0.060

STARTING FUEL DELIVERY

Rated speed rpm : 100
Uact V : 4.600
Del. quantity
cm3/1000 strokes : 115.0
Tolerance
cm3/1000 strokes : + 10.0
Check tolerance
cm3/1000s. : + 13.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 17,07,97 Edition Test oil : ISO 4113

Combination No. : 0 402 734 801

Injection pump

Pump designation : PES4P120A120RS7313 EP type number : 0 412 724 801

Governor

Governer design. : RQV400...1250PA1113K Governer no. : 0 421 815 376

Cust. part No. : 3926603

Customer-spec. information Customer : CDC : 4BTA-A Motor

Power KW : 97.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C Tolerance °C : +- 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0 Tolerance bar : +- 0.1

Test nozzle holde

: 1 688 901 103 assembly

Opening pressure

: 208.5 bar Tolerance bar : +- 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant. per values ____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : +- 1.0

Prestroke mm : 3.60 Tolerance mm : + 0.05 Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 12.50 Tolerance mm : \leftarrow 0.50

Firing order : 1-3-4-2

: 0-90-180-270 Phasing

Tolerance : +- 0.50 Check

: +- 0.75 tolerance °NW

Start of delivery blocking

*NW after s.o.d. : 5.75

Tolerance : +- 0.50

Check

tolerance "NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1150

Rack travel in mm: 14.85 Tolerance mm : \leftarrow 0.05

Del. quantity	+ Tolerance
cm3/1000 strokes : 173.5	+ cm3/1000 strokes : +- 1.0 + Check tolerance
Tolerance	+ cm3/1000s. : +- 4.0
cm3/1000 strokes : +- 1.0	+ Spreed + Tolerance
Check tolerance	+ cm3/1000 strokes : 8.0
cm3/1000s. : +- 4.0	+ Check tolerance
Channel	+ cm3/1000s. : 12.0
Spreed	Į
Tolerance	+
cm3/1000 strokes : 8.0	+ CONTROL LEVER
Check tolerance	† + control lever
cm3/1000s. : 12.0	position degree : 116.0
	tolerance degree : +- 6.0
	+ RATED SPEED
Rated speed rpm : 420	+ rack travel mm : 13.40
Nation Special Pill . Had	Rated speed rpm : 1310
Rack travel in mm: 6.60	Tolerance 1/min : + 15
Tolerance mm : +- 0.20	+
Del. quantity	+ rack travel mm : 4.00
cm3/1000 strokes : 16.0	Rated speed rpm : 1480
Tolerance	Tolerance 1/min : +- 5
cm3/1000 strokes : +- 3.0 Check tolerance	† + rack travel mm : 0.50
cm3/1000s. : +- 5.0	+ Tolerance mm : +- 0.50
Spreed	Rated speed rpm : 1550
Tolerance	+
cm3/1000 strokes : 4.0	+
Check tolerance	†
cm3/1000s. : 8.0	LOW IDLE
	T LOW IDEE
(B) SETTING OF INJECTION PUMP	
WITH GOVERNOR	control lever
•	position degree : 71.5
•	tolerance degree : +- 6.0
GUIDE SLEEVE POSITION	Control lever difference
	Grad : 44.5
	tolerance degree : +- 6.0
control lever	+
position degree : MAx	Setting point w/out bumper spring
Rated speed rpm : 1475	Rated speed rpm : 300
Rack travel in mm : 10.50	Auted speed (piii . 300
Tolerance mm : +- 1.50	CRT mm min. :> 7.50
-	†
FULL LOAD DELIVERY AT FULL LOAD STOP	+ Testing:
FOLE LUAD DELIVERY AT FULL LUAD STOP	T Rated speed rpm : 420
Rated speed rpm : 1150	rack travel mm : 6.60
Aneroid pressure	Tolerance mm : +- 0.20
hPa : 1200	
Del. quantity -	Rated speed rpm : 425
cm3/1000 strokes : 173.5 -	Ť

Del. quantity	
Rated speed rpm : 1150 rack travel mm : 14.85 Tolerance mm : + 0.05 Rated speed rpm : 850 rack travel mm : 13.90 Tolerance mm : + 0.20 Rated speed rpm : 1250 rack travel mm : 14.40 Tolerance mm : + 0.20 ANEROID/ALTITUDE COMPENSATOR TEST Rated speed rpm : 1150 Pressure hPa : 1200 Rated speed rpm : 1150 Pressure hPa : 1200 Rated speed rpm : 1150 Rated speed rpm : 1150 Pressure hPa : - 1200 Rated speed rpm : 1150 Rated speed rpm : 1150 Pressure hPa : - 1200 Rated speed rpm : 1150 Pressure hPa : - 1200 Rated speed rpm : 1150 Pressure hPa : - 1200 Rated speed rpm : 1150 Pressure hPa : - 1200 Rated speed rpm : 1150 Pressure hPa : - 1200 Rated speed rpm : 1150 Pressure hPa : - 1200 Rated speed rpm : 1150 Pressure hPa : - 1200 Rated speed rpm : 1150 Pressure hPa : - 1200 Rated speed rpm : 1150 Rated speed rpm : 10.50 Tolerance mm : + 0.50 Del. quantity cm3/1000 strokes : + 2.0 Tolerance mm : + 0.50 Del. quantity cm3/1000 strokes : 150.0 Tolerance mm : + 0.50 Del. quantity cm3/1000 strokes : 150.0 Tolerance mm : + 25.0 Tolerance mm : + 25.0 Pressure hPa : 555 rack travel mm : 13.20 Tolerance mm : + 0.20 Pressure hPa : 290	
Tack travel mm	
Tolerance mm : + 0.05 Rated speed rpm : 850 rack travel mm : 13.90 Tolerance mm : + 0.20 Rated speed rpm : 1250 rack travel mm : 14.40 Tolerance mm : + 0.20 Aneroid pressure hPa : 1250 Rated speed rpm : 1150 Pressure hPa : - 1200 Rated speed rpm : 1150 Pressure hPa : - 0.20 Rated speed rpm : 1150 Pressure hPa : - 0.20 Rated speed rpm : 1150 Pressure hPa : - 0.20 Rated speed rpm : 1150 Pressure hPa : - 0.20 Rated speed rpm : 1150 Pressure hPa : - 0.20 Rated speed rpm : 1150 Pressure hPa : - 0.20 Rated speed rpm : 10.50 Tolerance mm : + 0.20 Rated speed rpm : 100 Tolerance mm : + 0.20 Rated speed rpm : 100 Tolerance mm : + 0.20 Pressure hPa : 555 rack travel mm : 13.20 Tolerance mm : + 0.20 Pressure hPa : 555 rack travel mm : 13.20 Tolerance mm : + 0.20 Pressure hPa : 290	
Rated speed rpm : 850 rack travel mm : 13.90 Tolerance mm : + 0.20 Rated speed rpm : 1250 rack travel mm : 14.40 Tolerance mm : + 0.20 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 1150 Pressure hPa : 1200 Rated speed rpm : 1150 Rated speed rpm : 1150 Pressure hPa :	
Rated speed rpm : 850	
rack travel mm : 13.90 Tolerance mm : + 0.20 Rated speed rpm : 1250 rack travel mm : 14.40 Tolerance mm : + 0.20 ANEROID/ALTITUDE COMPENSATOR TEST Rated speed rpm : 1150 Pressure hPa : 1200 Rated speed rpm : 1150 Pressure hPa : 1200 Rated speed rpm : 1150 Pressure hPa : - 1200 Rated speed rpm : 1150 Pressure hPa : - 1200 Rated speed rpm : 1150 Pressure hPa : - 1200 MEASUREMENT Rated speed rpm : 1150 Pressure hPa : 10.50 Tolerance mm : + 0.20 MEASUREMENT Rated speed rpm : 1150 Pressure hPa : 555 Check tolerance cm3/1000 strokes : 150.0 Tolerance mm : + 0.50 Del. quantity Check tolerance cm3/1000 strokes : 150.0 Tolerance mm : + 0.50 Del. quantity Com3/1000 strokes : 150.0 Tolerance mm : + 0.50 Del. quantity Com3/1000 strokes : 150.0 Tolerance mm : + 0.50 Del. quantity Com3/1000 strokes : 150.0 Tolerance mm : + 0.50 Del. quantity Com3/1000 strokes : 150.0 Tolerance mm : + 0.50 Del. quantity Com3/1000 strokes : 150.0 Tolerance mm : + 0.50 Del. quantity Com3/1000 strokes : 150.0 Tolerance mm : + 0.50 Del. quantity Com3/1000 strokes : + 20.0 Check tolerance Com3/1000 strokes :	
Tolerance mm : + 0.20 Rated speed rpm : 1250 rack travel mm : 14.40 Tolerance mm : + 0.20 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 1150 Pressure hPa : 1200 Rated speed rpm : 1150 Pressure hPa : - rack travel mm : 10.50 Tolerance mm : + 0.20 MEASUREMENT Rated speed rpm : 1150 Pressure hPa : 12.80 Tolerance mm : + 0.50 MEASUREMENT Rated speed rpm : 1150 Pressure hPa : 555 Check tolerance cm3/1000 strokes : + 2.0 STARTING FUEL DELIVERY Rated speed rpm : 10.50 Tolerance mm : + 0.50 Del. quantity cm3/1000 strokes : 150.0 Tolerance mm : + 0.50 Del. quantity cm3/1000 strokes : 150.0 Tolerance mm : + 0.50 Del. quantity cm3/1000 strokes : + 20.0 Check tolerance cm3/1000 strokes : + 20.0 Check tolerance cm3/1000s. : + 25.0 Tolerance mm : + 0.20 Pressure hPa : 290	
Rated speed rpm : 1250 rack travel mm : 14.40 Tolerance mm : + 0.20 Aneroid pressure hPa : - Rated speed rpm : 1150 Del. quantity cm3/1000 strokes : 82.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.0 Rated speed rpm : 1150 Pressure hPa : 1200 Rated speed rpm : 10.50 Tolerance mm : + 0.20 MEASUREMENT Rated speed rpm : 1150 Pressure hPa : 150 Pressure hPa : 150 MEASUREMENT Rated speed rpm : 1150 Pressure hPa : 555 rack travel mm : 13.20 Tolerance mm : + 0.20 Pressure hPa : 555 rack travel mm : 13.20 Tolerance mm : + 0.20 Pressure hPa : 290	
rack travel mm : 14.40 Tolerance mm : + 0.20 Aneroid pressure hPa : - Rated speed rpm : 1150 Del. quantity cm3/1000 strokes : 82.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.0 Rated speed rpm : 1150 Pressure hPa : 1200 Rated speed rpm : 10.50 Tolerance mm : + 0.20 MEASUREMENT Rated speed rpm : 1150 Pressure hPa : 555 Rated speed rpm : 100 Tolerance mm : + 0.50 Tolerance cm3/1000 strokes : + 20.0 Check tolerance cm3/1000 strokes : + 20.0 Tolerance cm3/1000s. : + 25.0	
Aneroid pressure hPa	
ANEROID/ALTITUDE COMPENSATOR TEST ANEROID/ALTITUDE COMPENSATOR TEST Compensation SETTING Rated speed rpm : 1150 Pressure hPa : 1200 Rated speed rpm : 1150 Pressure hPa : 10.50 Tolerance mm : + 0.20 MEASUREMENT Rated speed rpm : 1150 Pressure hPa : 555 Rated speed rpm : 1150 Pressure hPa : 555 Tolerance mm : + 0.20 Pressure hPa : 555 Tolerance mm : + 0.20 Pressure hPa : 290 ANEROID/ALTITUDE Rated speed rpm : 1150 Pressure hPa : 555 Check tolerance cm3/1000 strokes : 150.0 Tolerance cm3/1000 strokes : + 20.0 Check tolerance cm3/1000 strokes : + 20.0 Check tolerance cm3/1000 strokes : + 25.0 Check tolerance cm3/1000 strokes : + 25.0	
Rated speed rpm : 1150	
ANEROID/ALTITUDE COMPENSATOR TEST Del. quantity cm3/1000 strokes : 82.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.0 Rated speed rpm : 1150 Pressure hPa : 1200 Rated speed rpm : 10.50 Tolerance mm : 10.50 Tolerance mm : + 0.20 MEASUREMENT Rated speed rpm : 1150 Pressure hPa : 555 Rated speed rpm : 1150 Pressure hPa : 555 Check tolerance cm3/1000s. : + 2.0 Tolerance mm : 12.80 Tolerance mm : + 0.50 Del. quantity cm3/1000s. : + 2.0 Check travel mm : 12.80 Tolerance cm3/1000 strokes : 150.0 Tolerance cm3/1000 strokes : + 20.0 Check tolerance cm3/1000s. : + 25.0 Pressure hPa : 290	
COMPENSATOR TEST Cm3/1000 strokes : 82.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.0 Rated speed rpm : 1150 Pressure hPa : 1200 Rated speed rpm : 10.50 Tolerance mm : 10.50 Tolerance mm : + 0.20 MEASUREMENT Rated speed rpm : 1150 Pressure hPa : 555 Pressure hPa : 555 Tolerance mm : + 0.20 Pressure hPa : 290 Cm3/1000 strokes : 42.0 Check tolerance cm3/1000s. : + 4.0 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 12.80 Tolerance mm : + 0.50 Del. quantity cm3/1000 strokes : 150.0 Tolerance cm3/1000 strokes : + 20.0 Check tolerance cm3/1000s. : + 25.0	
Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.0	
Cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.0	
Check tolerance cm3/1000s. : +- 4.0	
Rated speed rpm : 1150 Pressure hPa : 1200 Rated speed rpm : 1150 Pressure hPa : 10.50 Tolerance mm : 10.50 Rated speed rpm : 10.50 Tolerance mm : + 0.20 Rated speed rpm : 10.50 MEASUREMENT Rated speed rpm : 1150 Pressure hPa : 555 Pressure hPa : 555 Tolerance rack travel mm : 13.20 Tolerance mm : + 20.0 Check tolerance Cm3/1000s. : + 25.0 Check tolerance Cm3/1000s. : + 25.0 Tolerance mm : + 0.20	
Rated speed rpm : 1150 Pressure hPa : 1200 Rated speed rpm : 1150 Pressure hPa : - rack travel mm : 10.50 Tolerance mm : + 0.20 Rated speed rpm : 100 Tolerance mm : + 0.50 MEASUREMENT Rated speed rpm : 1150 Rated speed rpm : 150 Pressure hPa : 555 Check tolerance rack travel mm : 13.20 Tolerance mm : + 25.0 Pressure hPa : 290	
Rated speed rpm : 1150 Pressure hPa : - rack travel mm : 10.50 Tolerance mm : + 0.20 MEASUREMENT Rated speed rpm : 1150 Rated speed rpm : 1150 Rated speed rpm : 1150 Pressure hPa : 555 rack travel mm : 13.20 Tolerance cm3/1000 strokes : + 20.0 Check tolerance cm3/1000s. : + 25.0 Pressure hPa : 290	
Pressure hPa : - rack travel mm : 10.50 Tolerance mm : + 0.20 MEASUREMENT Rated speed rpm : 12.80 Tolerance mm : + 0.50 Del. quantity cm3/1000 strokes : 150.0 Tolerance cm3/1000 strokes : + 20.0 Pressure hPa : 555 rack travel mm : 13.20 Tolerance mm : + 0.20 Pressure hPa : 290	
Pressure hPa : - rack travel mm : 10.50 Tolerance mm : + 0.20 MEASUREMENT Rated speed rpm : 12.80 Tolerance mm : + 0.50 Del. quantity cm3/1000 strokes : 150.0 Tolerance cm3/1000 strokes : + 20.0 Pressure hPa : 555 rack travel mm : 13.20 Tolerance mm : + 0.20 Pressure hPa : 290	
rack travel mm : 10.50 Tolerance mm : + 0.20 MEASUREMENT Rated speed rpm : 12.80 Tolerance mm : + 0.50 Del. quantity cm3/1000 strokes : 150.0 Tolerance cm3/1000 strokes : + 20.0 Pressure hPa : 555 rack travel mm : 13.20 Tolerance mm : + 0.20 Pressure hPa : 290	
Tolerance mm : + 0.20	
Tolerance mm : + 0.50 MEASUREMENT Rated speed rpm : 1150 Pressure hPa : 555 rack travel mm : 13.20 Tolerance mm : + 20.0 Pressure hPa : 290 Tolerance mm : + 25.0 Tolerance mm : + 25.0	
MEASUREMENT Rated speed rpm : 1150 Pressure hPa : 555 rack travel mm : 13.20 Tolerance mm : + 0.20 Pressure hPa : 290 Del. quantity cm3/1000 strokes : 150.0 Tolerance cm3/1000 strokes : + 20.0 Check tolerance cm3/1000s. : + 25.0	
Rated speed rpm : 1150	
Rated speed rpm : 1150	
Pressure hPa : 555	
rack travel mm : 13.20 + cm3/1000s. : +- 25.0 Tolerance mm : +- 0.20 + cm3/1000s +- 25.0 Pressure hPa : 290 + cm3/1000s +- 25.0	
Tolerance mm : +- 0.20 +- Pressure hPa : 290 +-	
Pressure hPa : 290 +	
rack travel mm : 11.50 +	
T LOW IDEE	
Rated speed rpm : 420	
Start interlock	
+ Rack travel in mm : 6.60	
Rated speed rpm : > 100 + Tolerance mm : + 0.20	
Rated speed rpm : < 315 + Del. quantity	
+ cm3/1000 strokes : 16.0	
Check + Tolerance	
speed 1/min : > 80 + cm3/1000 strokes : + 3.0	
Check + Check tolerance + cm3/1000s. : +- 5.0	
# Spreed	
Tolerance	
FUEL DELIVERY CHARACTERISTICS + cm3/1000 strokes : 4.0	
+ Check tolerance	
Aneroid pressure	
hPa : 1200 +	
Rated speed rpm : 850 +	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 16.07.97 Test oil : ISO 4113

Combination No. : 0 402 736 807

Injection pump

Pump designation : PES6P110A120RS7214 EP type number : 0 412 716 805

Governor

Governer design. : RQV350...1100PA964

: -1K

Governer no. : 0 421 815 253

Cust. part No. : 3921771

Customer-spec. information
Customer : CDC
Motor : 6CTA-A
Power KW : 201.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : +- 1.0

Prestroke mm : 4.40
Tolerance mm : + 0.05
Check
tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.50

Check

tolerance °NW : + 0.75

Start of delivery blocking

*NW after s.o.d. : 5.50 Tolerance : + 0.50

Check

tolerance °NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm: 15.85

Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes : 2	P10 0 I	Tolerance mm	: +- 0.20
Tolerance		Rated speed rpm guide sleeve	: 1200
cm3/1000 strokes : +-	1.0	travel mm Tolerance mm	: 9.80 : + 0.20
Check tolerance cm3/1000S. : ←	4.0		
Spreed		GUIDE SLEEVE POSIT	TION
1	†		
Tolerance cm3/1000 strokes :	5.0	control lever position degree	: - 1
Check tolerance cm3/1000s.	9.0	FULL LOAD DELIVERY	' AT FULL LOAD STOP
	Ť		
	+	Rated speed rpm	: 1050
	+	Aneroid pressure	
Rated speed rpm : 3	850	hPa	: 1500
	+	Del. quantity	
	5.80	cm3/1000 strokes	: 210.0
Tolerance mm : +-	0.10	Tolerance	
Del. quantity	+	cm3/1000 strokes	: +- 1.0
	30.0 +	Check tolerance	
Tolerance	+	cm3/1000S.	: +- 4.0
cm3/1000 strokes : +-	3.0 +	Spreed	
Check tolerance	<u> </u>	Tolerance	5.0
cm3/1000s. : +-	5.0 +	cm3/1000 strokes	: 5.0
Spreed	†	Check tolerance	. 0.0
Tolerance	• • • • • • • • • • • • • • • • • • • •	cm3/1000s.	: 9.0
cm3/1000 strokes :	8.0		
Check tolerance cm3/1000s. :	12.0		
(1157 (0003	12.0	CONTROL LEVER	
(B) SETTING OF INJECTION	I DIMD	control lever	
WITH GOVERNOR	1 01.11	position degree	: 120.0
WITH GOVERNOR	1	tolerance degree	: → 6.0
	<u> </u>		
GUIDE SLEEVE TRAVEL	+	RATED SPEED	
	+	rack travel mm	: 14.50
Rated speed rpm : 10	000 +	Rated speed rpm	: 1150
guide sleeve	+	Tolerance 1/min	: +- 5
	8.20 +		4 00
Tolerance mm : +-	0.10	rack travel mm	: 4.00
	†	Rated speed rpm	: 1315
Rated speed rpm : 3 guide sleeve	50	Tolerance 1/min	: +- 15
	1.90	rack travel mm	: 0.50
Tolerance mm : +-		Tolerance mm	: +- 0.50
Total differ half	1	Rated speed rpm	: 1400
Rated speed rpm : 4	50		
guide sleeve	Ţ		
	3.30		
	0.20		
		LOW IDLE	
	00 +		
guide steeve	+		
travel mm :	5.30 +		

	+ Tolerance mm : +- 0.20
control lever position degree : 67.0 tolerance degree : +- 6.0	+ Pressure hPa : 335
toter affice degree . The O.O	+ rack travel mm : 10.15 + Tolerance mm : +- 0.05
Control lever difference	+
Grad : 53.0 tolerance degree : +- 6.0	Start interlock
_	Dated around man a 2 100
Setting point w/out bumper spring	+ Rated speed rpm : > 100 + Rated speed rpm : < 290
Rated speed rpm : 275	
CRT mm min. : > 7.20	+ speed 1/min : > 80
Testing:	+ Check + speed 1/min : < 300
•	+
Rated speed rpm : 350 rack travel mm : 5.80 Tolerance mm : +- 0.10	FUEL DELIVERY CHARACTERISTICS
Rated speed rpm : 425	Aneroid pressure
	+ hPa : 1500
TOPOUT CONTROL	Rated speed rpm : 650
TORQUE CONTROL Rated speed rpm : 1050	+ Del. quantity + cm3/1000 strokes : 193.5
rack travel mm : 15.85	† Tolerance
Tolerance mm : $\leftarrow 0.05$	cm3/1000 strokes : +- 3.0 Check tolerance
Rated speed rpm : 650	+ cm3/1000s. : + 6.0
rack travel mm : 13.40	+ Spreed
Tolerance mm : +- 0.20	+ Tolerance + cm3/1000 strokes : 8.0
Rated speed rpm : 1100	+ Check tolerance
rack travel mm : 15.60 Tolerance mm : + 0.10	+ cm3/1000s. : 12.0
loterance mm : +- U.IU	Ī
	Aneroid pressure
ANEROID/ALTITUDE COMPENSATOR TEST	+ hPa : - + Rated speed rpm : 500
CONFERENCE TEST	+ Del. quantity
SETTING	+ cm3/1000 strokes : 93.0 + Tolerance
	+ cm3/1000 strokes : +- 2.0
Reted speed rpm : 1050 Pressure hPa : 1500	+ Check tolerance + cm3/1000s. : +- 4.0
rack travel mm : 15.85	1 4.5
Tolerance mm : +- 0.05	+
Rated speed rpm : 1050	STARTING FUEL DELIVERY
Pressure hPa : -	+
rack travel mm : 8.30 Tolerance mm : +- 0.20	+ Rated speed rpm : 100 + rack travel mm : 11.50
Total and insure that	+ Tolerance mm : +- 0.50
MEASUREMENT	Del. quantity cm3/1000 strokes : 155.0
Rated speed rpm : 1050	Tolerance
Pressure hPa : 845	
rack travel mm : 13.80	+ cm3/1000s. : +- 25.0

LOW IDLE

Rated speed rpm	:		350	
Rack travel in mm Tolerance mm Del. quantity	:	+-	5.80 0.10	
cm3/1000 strokes	:		30.0	
cm3/1000 strokes Check tolerance	:	+	3.0	
cm3/1000s. Spreed	:	+-	5.0	
Tolerance cm3/1000 strokes Check tolerance	:		8.0	
cm3/1000s.	:		12.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 17.07.97 Test oil : ISO 4113

Combination No. : 0 403 466 148

Injection pump

Pump designation : PES6MW100/120RS1137

: -3

EP type number : 0 413 406 236

Governor

Governer design. : RSV550...1100MW2A335

: -8

Governer no. : 0 420 085 244

Cust. part No. : 392 9184

Customer-spec. information

Customer : CDC

Motor : 6CTA-830/2188E

Power KW : 209.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40 Tolerance °C : +- 2.0

Overflow valve : 1 417 433 047

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm : 3.55
Tolerance mm : + 0.05

Check tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance °NW : +- 0.75

Start of delivery blocking

*NW after s.o.d. : 9.00 Tolerance : +- 0.50

Check

tolerance $^{\circ}NW$: + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 14.55 Tolerance mm : + 0.05

ı	Ananaid maaaaa
Del. quantity	Aneroid pressure hPa : 1300
cm3/1000 strokes : 170.5	Del. quantity
	cm3/1000 strokes : 170.5
Tolerance +	Tolerance
cm3/1000 strokes : +- 1.0	cm3/1000 strokes : +- 1.0 Check tolerance
Check tolerance	cm3/1000s. : +- 4.0
cm3/1000s. : +- 4.0	Spreed
Connect	Tolerance
Spreed	cm3/1000 strokes : 4.0 Check tolerance
Tolerance	cm3/1000s. : 7.5
cm3/1000 strokes : 4.0	
Check tolerance	
cm3/1000s. : 7.5	CONTROL LEVER
†	control lever
Rated speed rpm : 550	position degree : 97.0
Rated speed rpm : 550	tolerance degree : +- 4.0
Rack travel in mm: 6.85	RATED SPEED
Tolerance mm : +- 0.10	rack travel mm : 13.50
Del. quantity	Rated speed rpm : 1165
cm3/1000 strokes : 27.5	Tolerance 1/min : +- 5
Tolerance	
cm3/1000 strokes : +- 2.0 +	rack travel mm : 4.00
Check tolerance	Rated speed rpm : 1255
cm3/1000s. : +- 4.5	Tolerance 1/min : +- 5
Spreed + Tolerance +	rack travel mm : 0.85
cm3/1000 strokes : 3.5	Tolerance mm : + 0.55
Check tolerance	Rated speed rpm : 1350
cm3/1000s. : 5.5	Nated speed (pill : 1996
1 3.3	rack travel mm : 4.00
1	Rated speed rpm : 1265
(B) SETTING OF INJECTION PUMP	Tolerance 1/min : +- 15
WITH GOVERNOR +	
†	
GUIDE SLEEVE POSITION	LOW IDLE
+	
+	
control lever +	control lever
position degree : - 3	position degree : 70.0
Rated speed rpm : 800 +	tolerance degree : +- 4.0
Rack travel in mm: 0.55	Control lever difference
Tolerance mm : + 0.20	Grad : 27.0
+	tolerance degree : +- 4.0
governor spring +	_
pre-tension +	Setting point w/out bumper spring
click setting x : 3.75	Dated around array at 550
†	Rated speed rpm : 550
ELLI LOAD DELTVEDY AT ELLI LOAD CTOD	rack travel mm : 6.35 Tolerance mm : +- 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP	TOTE GIVE MILL TO U. (U
Rated speed rpm : 1100	Testing:
the contract of the contract o	

Rated speed rpm rack travel mm Tolerance mm	: 550 : 6.85 : + 0.10	Aneroid pressure hPa : 1300 Rated speed rpm : 1000
rack travel mm Rated speed rpm		+ Del. quantity + cm3/1000 strokes : 178.0 + Tolerance
Tolerance 1/min		cm3/1000 strokes : +- 2.0 Check tolerance
SET IDLE AUXILIA	RY SPRING	cm3/1000s. : +- 5.0
rack travel mm	: 2.00	Aneroid pressure
TORQUE CONTROL	······································	- + hPa : - + Rated speed rpm : 500
Rated speed rpm rack travel mm	: 14.55	+ Del. quantity + cm3/1000 strokes : 100.5
Tolerance mm	: +- 0.05	+ Tolerance + cm3/1000 strokes : +- 1.0
Rated speed rpm rack travel mm	: 750 · 15 30	+ Check tolerance + cm3/1000s. : +- 3.0
Tolerance mm	: + 0.20	T (IIIS) 10003
Rated speed rpm rack travel mm	: 1000	STARTING FUEL DELIVERY
rack travel mm Tolerance mm	: + 0.10	+
		Rated speed rpm : 100 rack travel mm : 21.00
ANEROID/ALTITUDE		+ Tolerance mm : +- 1.00
COMPENSATOR TEST		+ Del. quantity + cm3/1000 strokes : 135.0
		+ Tolerance
SETTING		t cm3/1000 strokes : + 10.0 Check tolerance
Rated speed rpm	: 500	cm3/1000s. : +- 13.0
Pressure hPa rack travel mm		‡
Tolerance mm		†
Rated speed rpm Pressure hPa		LOW IDLE
rack travel mm Tolerance mm	: 10.95 : +- 0.10	Rated speed rpm : 550
MEASUREMENT		Rack travel in mm: 6.85 Tolerance mm: +- 0.10
Rated speed rpm	: 500	+ Del. quantity + cm3/1000 strokes : 27.5
Pressure hPa	: 620	+ Tolerance + cm3/1000 strokes : +- 2.0
rack travel mm		Check tolerance
Tolerance mm	: +- 0.20	- cm3/1000s. : +- 4.5 - Spreed
Pressure hPa rack travel mm	: 470 : 12.10	Tolerance cm3/1000 strokes : 3.5
Tolerance mm	: +- 0.05	Check tolerance cm3/1000s. : 5.5
		T (IIID/10003. ; 5.5
FUEL DELIVERY CHA	RACTERISTICS	- †
		

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 17.07.97 Test oil : ISO 4113

Combination No. : 0 400 074 896

Injection pump

Pump designation : PES4M55C32ORS110 EP type number : 0 410 054 956

Governor

Governer design. : RSF375/2200M21 Governer no. : 0 420 021 148

Cust. part No. :

Customer-spec. information

Customer : MB-NFZ

Motor : 0M616 2.4L ADA

Power KW : 55.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 1 417 413 012

Inlet press. bar : 1.0

Test nozzle holde

assembly : 1 688 901 111

Opening pressure

bar : 148.5 Tolerance bar : + 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 1.75
Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 20.00

Firing order : 1-3-4-2

Phasing : 0-90-180-270

Start of delivery mark

Tolerance : + 0.20

Check

tolerance °NW : +- 0.30

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm : 12.65

Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes :

Tolerance

37.5

cm3/1000 strokes : +- 0.5

Check tolerance cm3/1000s. : +- 1.5

Spreed Tolerance

cm3/1000 strokes : 2.5

+	
Check tolerance cm3/1000s. : 3.0	SET IDLE CONTROL LEVER POSITION
Rated speed rpm : 375	Rated speed rpm : 1000
Rack travel in mm : 6.20 Tolerance mm : + 0.10 Del. quantity	CRT mm max. : 1.45
cm3/1000 strokes : 7.5	LOW IDLE
cm3/1000 strokes : + 0.5 + Spreed	control lever
Tolerance cm3/1000 strokes : 1.0	position degree : 10.0 tolerance degree : +- 2.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Setting point w/out bumper spring Rated speed rpm : 375 rack travel mm : 6.20
IDLE STAGE	SET IDLE AUXILIARY SPRING
Thee stage	Rated speed rpm : 450 rack travel mm : 5.20
Rack travel in mm: 6.00 + Tolerance mm: + 0.10	To erance mm : +- 0.10
†	rack travel mm : 2.00 Rated speed rpm : 780
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 780 Tolerance 1/min : +- 50
Rated speed rpm : 1000 + Ref. pressure	Load pick-up
ALDA / ADA hPa : 1100 + Del. quantity +	Rated speed rpm : 250 rack travel mm :> 10.00
cm3/1000 strokes : 37.5	Rated speed rpm : 1000
cm3/1000 strokes : +- 0.5	CRT mm max. : 1.45
cm3/1000S. : + 1.5 + Spreed + Tolerance +	rack travel mm : 6.20 Rated speed rpm : 375
cm3/1000 strokes : 2.5 + Check tolerance	The second secon
cm3/1000s. : 3.0	TORQUE CONTROL
RATED SPEED	Rated speed rpm : 1000 rack travel mm : 12.65 Tolerance mm : +- 0.05
control lever position degree : 50.0	Rated speed rpm : 1700 rack travel mm : 12.30
Rated speed rpm : 2350 rack travel mm : 8.40	Tolerance mm : + 0.10
rack travel mm : 8.40 Tolerance mm : + 0.20	Rated speed rpm : 2150 rack travel mm : 11.90
Rated speed rpm : 2500 rack travel mm : 0.50 Tolerance mm : + 0.50	Tolerance mm : + 0.10
10001 at the limit . , 0.50	ADJUSTMENT TEST ADA/ALDA

SETTING

Rated speed rpm 1000 Ref. pressure ALDA / ADA hPa 950

-0.10rack travel mm : + 0.10 Tolerance mm

MEASUREMENT

Rated speed rpm 1000 Ref. pressure ALDA / ADA hPa 900 rack travel mm -0.60Tolerance mm : + 0.10

Ref. pressure

ALDA / ADA hPa 750 rack travel mm -2.00 Tolerance mm : + 0.20

FUEL DELIVERY CHARACTERISTICS

Ref. pressure

ALDA / ADA hPa 1100 Rated speed rpm 1700

Del. quantity

cm3/1000 strokes : 38.3

Tolerance

cm3/1000 strokes : +-0.8

Check tolerance

cm3/1000s. 1.8 : +--Spreed

Tolerance

cm3/1000 strokes : 2.5

Check tolerance

3.0 cm3/1000S.

Ref. pressure

ALDA / ADA hPa 1100 2150 Rated speed rpm

Sc. sed

Del. quantity

cm3/1000 strokes : 38.3

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s.2.0 : +--

Spreed

Tolerance

2.5 cm3/1000 strokes :

Check tolerance

3.0 cm3/1000S.

STARTING FUEL DELIVERY

100 Rated speed rpm 20.10 rack travel mm

Del. quantity

cm3/1000 strokes : 52.0

Spreed

Tolerance

cm3/1000 strokes : 6.0

Check tolerance

cm3/1000s. 6.0

LOW IDLE

375 Rated speed rpm

Del. quantity

8.3

cm3/1000 strokes : Check tolerance

1.8

cm3/1000s. Spreed

Check tolerance

cm3/1000s. 1.5

control Lever

position degree : > 49.00

control lever

position degree : < 46.50

SETTING PNEUMATIC FAST IDLE (PLA)

(PLA) POSITION

control lever

position degree 10.0 : tolerance degree : +-2.0

TESTING PNEUMATIC SHUTOFF DEVICE

Rated speed rpm :

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 18.07.97 Test oil : ISO 4113

Combination No. : 0 401 846 529

Injection pump

Pump designation : PE6P120A320RS3186 EP type number : 0 411 826 756

Governor

Governer design. : RQV250...1025PA921

: -4

Governer no. : 0 421 813 787

Cust. part No. : 422719-P05 V. 06/92

Customer-spec. information

Customer : VOLVO-TRUCK
Motor : TD102F (Q)
Power KW : 220.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Vibration damper

(RoBo diaphragm) : 4.2

Test oil inlet

temp. °C : 40 Tolerance °C : + 2.0

Overflow valve : 2 417 413 046

Inlet press. bar : 2.5
Tolerance bar : + 0.1

Overflow quantity

min. L/h : 120 Tolerance L/h : +- 20.0

Test nozzle holde

assembly : 1 688 901 019

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter : 3.0
x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 2.65
Tolerance mm : + 0.05
Check

tolerance mm

mm : +- 0.10

Rack travel in mm : 10.00 Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.50

Check

tolerance *NW : +- 0.75

Start of delivery mark

Tolerance : + 0.50

Check

tolerance °NW : +- 0.75

Barrel no. : 1

	†	Tolerance mm : +- 0.05	
BASIC SETTING		Rated speed rpm : 900 guide sleeve	
Rated speed rpm	: 700	travel mm : 6.50	
		Tolerance mm : +- 0.10	
Rack travel in m		Rated speed rpm : 430	
Tolerance mm	: +- 0.05 	guide sleeve	
N=1		travel mm : 3.65	
Del. quantity cm3/1000 strokes	: 198.0	Tolerance mm : +- 0.15	
T -1		Rated speed rpm : 700	
Tolerance cm3/1000 strokes		guide sleeve travel mm : 6.50	
CIID/ TOOD SCHOKES	I I	Tolerance mm : +- 0.10	
Check tolerance	-	. Otto	
cm3/1000s.	: +- 4.0		
	+	GUIDE SLEEVE POSITION	
Spreed	†		
Talamanaa	†	control lever	
Tolerance cm3/1000 strokes	so I	position degree : - 1	
CIID 1000 Strokes	I	Rated speed rpm : 1080	
Check tolerance			
cm3/1000s.		Rack travel in mm : 16.50	
	+	Tolerance mm : +- 1.30	
	+		
	+		
Rated speed rpm	: 250 †	FULL LOAD DELIVERY AT FULL LOAD STOP)
Rack travel in m	m· 5 10	Rated speed rpm : 700	
Tolerance mm	$I \mapsto 0.10$	Aneroid pressure	
Del. quantity	1	hPa : 1000	
cm3/1000 strokes	: 19.0	Del. quantity	
Tolerance	1	cm3/1000 strokes : 198.0	
cm3/1000 strokes	: +- 2.5 	Tolerance	
Check tolerance	+	cm3/1000 strokes : + 1.0	
cm3/1000s.	: +- 5.0 +	Check tolerance	
Spreed	†	cm3/1000s. : +- 4.0	
Tolerance	: 5.0	Spreed	
cm3/1000 strokes Check tolerance	•	Tolerance cm3/1000 strokes : 5.0	
cm3/1000s.	: 7.0	Check tolerance	
	+	cm3/1000s. : 9.0	
	+		
(B) SETTING OF I	NJECTION PUMP +		
WITH GOVERNOR	+		
	†	CONTROL LEVER	
GUIDE SLEEVE TRA	VEI 1	control lever	
GOIDE SPEEKE IKW	T I	position degree : 62.0	
Rated speed rpm	: 1080	tolerance degree : +- 4.0	
guide sleeve	<u> </u>		
travel mm	: 8.40	control lever	
Tolerance mm	: +- 0.10 	position degree : 117.0	
	+	tolerance degree : $+-$ 4.0	
Rated speed rpm	: 250 +	DATES OFFE	
guide sleeve		UAILI VIII LI	
travel mm	: 1.25	RATED SPEED rack travel mm : 11.45	

Rated speed rpm Tolerance 1/min	: 1060 : + 5
rack travel mm Rated speed rpm Tolerance î/min	: 4.00 : 1135 : +- 15
rack travel mm Tolerance mm Rated speed rpm	: 0.50 : +- 0.50 : 1250
LOW IDLE	
control lever position degree tolerance degree	: 65.0 : +- 4.0
control lever position degree tolerance degree	: 8.0 : +- 4.0
Setting point w/o	ut bumper spring
Rated speed rpm	: 150
CRT mm min.	: > 7.00
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 250 : 5.10 : + 0.10
Rated speed rpm	: 300
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 700 : 12.45 : +- 0.05
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1000 : 12.45 : +- 0.05
Rated speed rpm	: 500

Tolerance mm : +- 0.10 MEASUREMENT Rated speed rpm : 500 Pressure hPa : 510 rack travel mm : 2.35 Tolerance mm : +- 0.20 Pressure hPa : 100 rack travel mm : 0.25 Tolerance mm : +- 0.05 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : Rated speed rpm : 700 Del. quantity cm3/1000 strokes : 144.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0		
Rated speed rpm : 500 Pressure hPa : 510 rack travel mm : 2.35 Tolerance mm : + 0.20 Pressure hPa : 100 rack travel mm : 0.25 Tolerance mm : + 0.05 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : - Rated speed rpm : 700 Del. quantity cm3/1000 strokes : 144.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance	Tolerance mm	: +- 0.10
Pressure hPa : 510 rack travel mm : 2.35 Tolerance mm : + 0.20 Pressure hPa : 100 rack travel mm : 0.25 Tolerance mm : + 0.05 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : - Rated speed rpm : 700 Del. quantity cm3/1000 strokes : 144.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance	MEASUREMENT	
rack travel mm : 2.35 Tolerance mm : + 0.20 Pressure hPa : 100 rack travel mm : 0.25 Tolerance mm : + 0.05 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : - Rated speed rpm : 700 Del. quantity cm3/1000 strokes : 144.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance	Rated speed rpm	: 500
rack travel mm : 0.25 Tolerance mm : + 0.05 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : - Rated speed rpm : 700 Del. quantity cm3/1000 strokes : 144.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance	rack travel mm	: 2.35
Aneroid pressure hPa : - Rated speed rpm : 700 Del. quantity cm3/1000 strokes : 144.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance	rack travel mm	: 0.25
hPa : - Rated speed rpm : 700 Del. quantity cm3/1000 strokes : 144.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance	FUEL DELIVERY CHA	RACTERISTICS
	hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: 144.0 : + 1.0
	Rated speed rpm	: 250
Rated speed rpm : 250		: 5.10 : + 0.10
Rack travel in mm : 5.10 Tolerance mm : + 0.10	cm3/1000 strokes	: 19.0
Rack travel in mm : 5.10 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 19.0	cm3/1000 strokes	: + 2.5
Rack travel in mm : 5.10 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 19.0 Tolerance cm3/1000 strokes : + 2.5	cm3/1000s.	: +- 5.0
Rack travel in mm : 5.10 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 19.0 Tolerance cm3/1000 strokes : + 2.5 Check tolerance cm3/1000s. : + 5.0	Tolerance cm3/1000 strokes	: 5.0
Rack travel in mm : 5.10 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 19.0 Tolerance cm3/1000 strokes : + 2.5 Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 5.0	Check tolerance cm3/1000S.	: 7.0
Rack travel in mm: 5.10 Tolerance mm: + 0.10 Del. quantity cm3/1000 strokes: 19.0 Tolerance cm3/1000 strokes: + 2.5 Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes: 5.0 Check tolerance		

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 17.07.97 Test oil : 17.07.97

Combination No. : 0 401 848 830

Injection pump

Pump designation : PE8P110A320LS3865 EP type number : 0 411 818 728

Governor

Governer design. : RQV250...1000PA1286

Governer no. : 0 421 814 175

Cust. part No. :

Customer-spec. information Customer : DHI : V2-8TC Motor

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C Tolerance °C : +- 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Overflow quantity min. L/h : 110
Tolerance L/h : + 20.0

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

: 208.5 bar Tolerance bar : +- 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0 600 x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.00 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

Firing order : 8-7-2-6-3

: - 5- 4- 1

: 0-45-90-135-180 Phasing : -225-270-315

Tolerance : \leftarrow 0.50

Check

tolerance *NW : + 0.75

Start of delivery mark

Tolerance : \leftarrow 0.50

Check

tolerance *NW : +- 0.75

Barrel no. : 8

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm: 13.00

Tolerance mm : + 0.05

	→ guide sleeve
Del. quantity	+ travel mm : 3.20
cm3/1000 strokes : 142.0	+ Tolerance mm : +- 0.25
	+
Tolerance	+ Rated speed rpm : 1300
cm3/1000 strokes : +- 1.0	guide sleeve
Charl talanna	+ travel mm : 11.50
Check tolerance	Tolerance mm : + 0.50
cm $3/1000$ s. : +- 4.0	T
Spreed	GUIDE SLEEVE POSITION
ορι cca	-
Tolerance	
cm3/1000 strokes : 6.0	+ control lever
	+ position degree : - 1
Check tolerance	+ Rated speed rpm : 1120
cm3/1000s. : 10.0	+
	+ Rack travel in mm : 12.00
	+ Tolerance mm : +- 2.00
Rated speed rpm : 250	†
rated speed rpm : 250	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm: 8.20	TOLL LOAD DELIVERY AT TOLL LOAD STOT
Tolerance mm : + 0.10	+ Rated speed rpm : 1000
Del. quantity	Aneroid pressure
cm3/1000 strokes : 25.0	+ hPa : -
Tolerance	+ Del. quantity
cm3/1000 strokes : + 3.0	+ cm3/1000 strokes : 142.0
Check tolerance	+ Tolerance
cm3/1000s. : +- 6.0	+ cm3/1000 strokes : + 1.0
Spreed	+ Check tolerance
Tolerance cm3/1000 strokes : 6.0	+ cm3/1000s. : +- 4.0
cm3/1000 strokes : 6.0 Check tolerance	+ Spreed + Tolerance
cm3/1000s. : 10.0	cm3/1000 strokes : 6.0
(1857 10000).	Check tolerance
	+ cm3/1000s. : 10.0
(B) SETTING OF INJECTION PUMP	+
WITH GOVERNOR	+
	+ CONTROL LEVER
GUIDE SLEEVE TRAVEL	†
Date of annual community 1050	control lever
Rated speed rpm : 1058	<pre>position degree : 65.0 tolerance degree : + 4.0</pre>
guide sleeve travel mm : 8.56	T toterance degree . +- 4.0
Tolerance mm : + 0.15	control lever
Total and the state of the stat	position degree : 120.0
Rated speed rpm : 250	+ tolerance degree : +- 4.0
guide sleeve	+
travel mm : 1.31	+ RATED SPEED
Tolerance mm : +- 0.20	+ rack travel nm : 12.00
	Rated speed rpm : 1045
Rated speed rpm : 666	+ Tolerance 1/min : + 5
guide sleeve	† modultmovel on 1,00
travel mm : 5.29 Tolerance mm : + 0.25	+ rack travel mm : 4.00 + Rated speed rpm : 1155
Tolerance mm : + 0.25	+ Rated speed rpm : 1155 + Tolerance 1/min : +- 15
Rated speed rpm : 380	Total ance 1/11/11
natea apaca i piir .	rack travel mm : 0.50
	•

: +- 0.50 Tolerance mm Rated speed rpm : 1300 LOW IDLE control lever position degree : 71.0 tolerance degree : + 4.0 control lever position degree : 16.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 150 CRT mm min. :> 9.60Testing: 250 Rated speed rpm : rack travel mm 8.20 Tolerance mm : +- 0.10 Rated speed rpm : 400 TORQUE CONTROL : 1000 Rated speed rpm rack travel am : 13.00 : +- 0.05 Tolerance mm Rated speed rpm 650 : rack travel mm : 13.00 : +- 0.10 Tolerance mm Start interlock Rated speed rpm : > 100 Rated speed rpm : < 190 Check speed 1/min : > 80 Check speed 1/min : < 210 FUEL DELIVERY CHARACTERISTICS Aneroid pressure

Del. quantity cm3/1000 strokes : 145.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. 6.0 STARTING FUEL DELIVERY Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 125.0 Tolerance cm3/1000 strokes : +- 20.0 Check tolerance cm3/1000s. : +- 24.0 LOW IDLE Rated speed rpm : 250 8,20 Rack travel in mm : Tolerance mm : \leftarrow 0.10 Del. quantity 25.0 cm3/1000 strokes : Tolerance cm3/1000 strokes : +- 3.0Check tolerance cm3/1000s. : +-6.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 10.0

End of test specification sheet

Rated speed rpm :

650

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 17.07.97 Edition Test oil : ISO 4113

Combination No. : 0 401 878 140

Injection pump

Pump designation : PE8P12OA52O/5RS427 EP type number : 0 411 828 048

Governor

Governer design. : RSUV300...900P0A320

: -1

Governer no. : 0 421 829 107

Cust. part No. :

Customer-spec. information

Customer : MWM

: TBD 234 V8 Motor Power KW : 400.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C Tolerance °C : + 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5

Test nozzle holde

: 1 688 901 019 assembly

Opening pressure

: 203.5 bar Tolerance bar : + 1.5

Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : +-2.85 : +- 0.05 Check

tolerance mm : +- 0.10

Rack travel in imm: 10.50 Tolerance mm : + 1.50

Firing order : 1-8-5-4-7

: - 2- 3- 6

Phasing : 0-30-90-120-180

: -210-270-300 Tolerance : +- 0.50

Check

tolerance *NW : +- 0.75

Start of delivery mark

Tolerance : +- 0.50

Check

tolerance *NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 750

Rack travel in mm: 13.75 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 250.0

Tolerance	+ Tolerance
cm3/1000 strokes : +- 1.0	+ cm3/1000 strokes : +- 1.0
	+ Check tolerance
Check tolerance	+ cm3/1000s. : +- 4.0
cm3/1000s. : +- 4.0	+ Spreed
	† Tolerance
Spreed	+ cm3/1000 strokes : 5.0
	+ Check tolerance
Tolerance	+ cm3/1000s. : 9.0
cm3/1000 strokes : 5.0	+
	+
Check tolerance	
cm3/1000s. : 9.0	+ CONTROL LEVER
	†
	control lever
700	+ position degree : 119.0
Rated speed rpm : 300	tolerance degree : +- 4.0
Deal Americal in mm . E 40	T DATED COURT
Rack travel in mm: 5.60	+ RATED SPEED
Tolerance mm : +- 0.10	+ rack travel mm : 12.70
Del. quantity	+ Rated speed rpm : 945
cm3/1000 strokes : 23.0	+ Tolerance 1/min : +- 5
Tolerance cm3/1000 strokes : +- 3.0	rack travel mm : 4.00
Check tolerance	Rated speed rpm : 980
cm3/1000s. : +- 6.0	+ Tolerance 1/min : +- 15
Spreed	I locerance symmetric .
Tolerance	rack travel mm : 0.85
cm3/1000 strokes : 8.0	+ Tolerance mm : +- 0.55
Check tolerance	+ Rated speed rpm : 1130
cm3/1000s. : 12.0	1 Mateur Speed (pill 1 1130
. 72.0	1
	1
(B) SETTING OF INJECTION PUMP	
WITH GOVERNOR	+ LOW IDLE
	+
	+
	+ control lever
GUIDE SLEEVE POSITION	+ position degree : 76.0
	+ tolerance degree : +- 4.0
	+
control lever	+ Setting point w/out bumper spring
position degree : - 3	†
Rated speed rpm : 800	+ Rated speed rpm : 300
	+ rack travel mm : 5.10
Rack travel in mm: 0.50	Tolerance mm : +- 0.10
Tolerance mm : + 0.20	† Tanking
	+ Testing:
governor spring	Poted aread 200
pre-tension 7.80	+ Rated speed rpm : 300
click setting x : 3.80	rack travel mm : 5.60
	Tolerance mm : + 0.10
SHILL LOAD DELTI/EDV AT ELILL LOAD STOD	rack travel mm : 2.00
FULL LOAD DELIVERY AT FULL LOAD STOP	
Datasi aroad nam · 750	+ Rated speed rpm : 350 + Tolerance 1/min : +- 30
Rated speed rpm : 750	T Total and 1/mill : + 30
Aneroid pressure	T
hPa : -	TOPOLE CONTROL
Del. quantity	TORQUE CONTROL
cm3/1000 strokes : 250.0	T

3.90 Dimension a mm : 750 Rated speed rpm 13.75 rack travel mm : +- 0.05 Tolerance mm 900 Rated seed rom 13.75 rack travel mm : + 0.10 Tolerance mm 450 Rated speed rpm : 13.75 rack travel mm : +- 0.10 Tolerance mm Rated speed rpm 280 15.20 rack travel mm : +- 0.30 Tolerance mm

STARTING FUEL DELIVERY

Rated speed rpm : 100

LOW IDLE

cm3/1000S.

Rated speed rpm : 300 Rack travel in mm: 5.60 : +- 0.10 Tolerance mm Del. quantity cm3/1000 strokes : 23.0 Tolerance cm3/1000 strokes : +- 3.0Check tolerance cm3/1000s. : **←** 6.0 Spreed Tolerance 8.0 cm3/1000 strokes : Check tolerance

12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 18,07,97 Edition : ISO 4113 Test oil

Combination No. : 0 402 046 350

Injection pump

Pump designation : PES6P110A720RS531 EP type number : 0 412 016 076

Governor

Governer design. : RQV300...1100PA1016

: -7

: 0 421 813 972 Governer no.

Cust. part No. :

Customer-spec. information

Customer : IVECO-UNIC : 8361.25.510 Motor

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

173.5 Tolerance bar : +- 1.5

: 1 680 750 015 Test lines

Outside diameter : 6.0

x inside diameter : 1.5 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm 2.05 : + - 0.50Tolerance mm

Check

: +- 0.10tolerance mm

Rack travel in mm : 10.50 Tolerance mm : + 1.50

: 1-5-3-6-2-Firing order

Phasing : 0-60-120-180-240

: -300

Tolerance : **←** 0.50

Check

tolerance *NW : +- 0.75

BASIC SETTING

Del. quantity cm3/1000 strokes : 121.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance cm3/1000s. : +- 3.5

Spreed

Tolerance

cm3/1000 strokes :

4.0

7.5

Check tolerance

cm3/1000s.

†	
Rated speed rpm : 300	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm: 6.20	Rated speed rpm : 1100
Tolerance mm : + 0.10 +	Aneroid pressure
Del. quantity +	hPa : 700
cm3/1000 strokes : 15.5	Del. quantity
Tolerance + cm3/1000 strokes : +- 2.5 +	cm3/1000 strokes : 121.0
cm3/1000 strokes : +- 2.5 +- Check tolerance +-	Tolerance cm3/1000 strokes : +- 1.0
cm3/1000s. : +- 5.0	Check tolerance
Spreed	cm3/1000s. : +- 3.5
Tolerance	Spreed
cm3/1000 strokes : 4.5 +	Tolerance
Check tolerance +	cm3/1000 strokes : 4.0
cm3/1000s. : 7.5	Check tolerance
Ţ.	cm3/1000s. : 7.5
(B) SETTING OF INJECTION PUMP	
WITH GOVERNOR	
+	CONTROL LEVER
GUIDE SLEEVE TRAVEL	control lever
Dated mand man 4 750	position degree : 121.0
Rated speed rpm : 750	tolerance degree : +- 4.0
guide sleeve + travel mm : 4.70 +	RATED SPEED
Tolerance mm : + 0.20	rack travel mm : 9.30
Total differ than	Rated speed rpm : 1145
Rated speed rpm : 1145	Tolerance 1/min : + 5
guide sleeve	Check
travel mm : 8.40 +	speed $1/\min$: $+-$ 10
Tolerance mm : + 0.10 +	
700	rack travel mm : 4.00
Rated speed rpm : 300	Rated speed rpm : 1220 Tolerance 1/min : +- 15
guide sleeve + travel mm : 1.00 +	Tolerance 1/min : +- 15 Check
Tolerance mm : +- 0.20	speed 1/min : +- 20
Total differential	5pccd 1/11111
Rated speed rpm : 500	rack travel mm : 0.50
guide sleeve	Tolerance mm : +- 0.50
travel mm : 2.80	Rated speed rpm : 1350
Tolerance mm : + 0.30 +	
Poted aread area : 1750	rack travel mm : 4.00
Rated speed rpm : 1350	
guide sleeve + travel mm : 11.50 +	
Tolerance mm : +- 0.50	
- Oceranic limit	LOW IDLE
<u> </u>	
GUIDE SLEEVE POSITION	
+	control lever
† · · · · · · · · · · · · · · · · · · ·	position degree : 67.0
control lever	tolerance degree : +- 4.0
position degree : -1 Rated speed rpm : 1240	Setting point w/out bumper spring
המנכט שבכט ואוו . ונייט	second bounc mode pointer should
Rack travel in mm: 9.30	Rated speed rpm : 100
Tolerance mm : + 1.30	

CRT mm min. : > 7.70 Testing: Rated speed rpm 300 rack travel mm 6.20 : +- 0.10 Tolerance mm 430 Rated speed rpm : ANEROID/ALTITUDE COMPENSATOR TEST SETTING 500 Rated speed rpm Pressure hPa 700 10.35 rack travel mm : +- 0.05 Tolerance mm Rated speed rpm 500 Pressure hPa 9.05 rack travel mm Tolerance mm : + 0.15**MEASUREMENT** Rated speed rpm 500 430 Pressure hPa 9.50 rack travel mm Tolerance mm : + 0.10465 Pressure hPa 9.95 rack travel mm : : +- 0.05Tolerance mm Start interlock Rated speed rpm : > 100 Check speed 1/min : > 80 FUEL DELIVERY CHARACTERISTICS Aneroid pressure

hPa 1100 Rated speed rpm : Del. quantity cm3/1000 strokes : Tolerance

Check tolerance : +- 3.5 cm3/1000s. STARTING FUEL DELIVERY

ESS test: With 24 V solenoid activated, rack must reach start position in max. control lever setting.

: +- 19.0

Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 230.0 Tolerance cm3/1000 strokes : +- 15.0Check tolerance

LOW IDLE

cm3/1000s.

cm3/1000s.

Rated speed rpm : 300 Rack travel in mm: 6.20 Tolerance mm : \leftarrow 0.10 Del. quantity cm3/1000 strokes : 15.5 Tolerance cm3/1000 strokes : +- 2.5Check tolerance cm3/1000s. 5.0 : +-Spreed Tolerance cm3/1000 strokes : 4.5 Check tolerance

7.5

End of test specification sheet

cm3/1000 strokes : +- 1.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 17,07.97 : ISO 4113

Combination No. : 0 402 646 651

Injection pump

Pump designation : PE6P12OA32OLS7357 EP type number : 0 412 626 934

Governor

Governer design. : RQV325...975PA1190K

Governer no. : 0 421 815 450

Cust. part No. :

Customer-spec. information Customer : LIAZ Motor : M640T Power KW : 280.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C 40 Tolerance °C : + 2.0

: 1 417 413 025 Overflow valve

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

: 208.5 bar Tolerance bar

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar: 26.0 Tolerance bar : +- 1.0

Prestroke mm : 4.80 Tolerance mm : + 0.05 Check tolerance mm : \leftarrow 0.10

Rack travel in mm : 12.00 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-: 4

: 0-60-120-180-240 Phasing

: -300

Tolerance : **←** 0.50

Check

tolerance °NW : + 0.75

Start of delivery mark

: +- 0.50Tolerance

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 725

Rack travel in mm : 14.40 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 267.0

Tolerance cm3/1000 strokes : + 1.0	Tolerance mm : +- 0.25 Rated speed rpm : 1240
Check tolerance cm3/1000s. : +- 4.0	guide sleeve travel mm : 13.50
Spreed	Tolerance mm : +- 0.50
Tolerance cm3/1000 strokes : 5.0	GUIDE SLEEVE POSITION
Check tolerance cm3/1000s. : 9.0	control lever position degree : - 1 Rated speed rpm : 1070
Rack travel in mm : 4.10 + Tolerance mm : + 0.30 +	Rack travel in mm : 14.10 Tolerance mm : +- 1.50
Toterance min . += 0.30	FULL LOAD DELIVERY AT FULL LOAD STOP
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Rated speed rpm : 725 Aneroid pressure hPa : - Del. quantity
GUIDE SLEEVE TRAVEL	cm3/1000 strokes : 267.0 Tolerance
Rated speed rpm : 1033 - guide sleeve	cm3/1000 strokes : + 1.0 Check tolerance
travel mm : 10.20 +	cm3/1000s. : +- 4.0
Tolerance mm : +- 0.20 +	Spreed Tolerance
Rated speed rpm : 325 + guide sleeve +	cm3/1000 strokes : 5.0 Check tolerance
travel mm : 1.43 +	cm3/1000s. : 9.0
Tolerance mm : + 0.15	
Rated speed rpm : 620	CONTROL A FUED
guide sleeve + travel mm : 5.01 +	CONTROL LEVER
Tolerance mm : +- 0.25	control lever position degree : 70.0
Rated speed rpm : 370 + guide sleeve +	tolerance degree : +- 4.0
travel mm : 2.00 +	control lever
Tolerance mm : +- 0.25	position degree : 122.0 tolerance degree : +- 4.0
Rated speed rpm : 420	_
guide steeve + travel mm : 2.64 +	RATED SPEED rack travel mm : 14.10
Tolerance mm : + 0.25	Rated speed rpm : 1020
Rated speed rpm : 460	Tolerance 1/min : + 5
guide sleeve + travel mm : 3.02 +	rack travel mm : 4.00 Rated speed rpm : 1125
Tolerance mm : +- 0.25	Tolerance 1/min : + 15
Rated speed rpm : 1141	rack travel mm : 0.50
guide sleeve + travel mm : 12.00 +	Tolerance mm : +- 0.50 Rated speed rpm : 1200

LOW IDLE	
control lever position degree tolerance degree	: 67.0 : +- 4.0
control lever position degree tolerance degree	: 14.0 : +- 4.0
Setting point w/o	ut bumper spring
Rated speed rpm	: 225
CRT mm min.	: > 5.30
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 325 : 4.10 : + 0.30
Rated speed rpm	: 350
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 725 : 14.40 : +- 0.05
Rated speed rpm rack travel mm Tolerance mm	: 975 : 15.15 : + 0.20
Rated speed rpm rack travel mm Tolerance mm	
ANEROID/ALTITUDE COMPENSATOR TEST	·
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 975 : 1500 : 15.15 : + 0.05
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 975 : - : 9.40 : + 0.10

MEASUREMENT		
Rated speed rpm	: 975	
Pressure hPa rack travel mm Tolerance mm	: 320 : 11.00 : + 0.25	
Pressure hPa rack travel mm Tolerance mm	: 590 : 13.50 : +- 0.05	
Start interlock		
Rated speed rpm Rated speed rpm	: > 100 : < 245	
Check speed 1/min Check	: > 80	
speed 1/min	: < 265	
FUEL DELIVERY CHA	RACTERISTICS	
Aneroid pressure		
	975	
cm3/1000 strokes Tolerance	: 262.0	
cm3/1000 strokes Check tolerance	: +- 3.0	
cm3/1000s.		
	: + 6.0	
Aneroid pressure	: + 6.0	
hPa Rated speed rpm	: +- 6.0 : - : 500	
hPa Rated speed rpm Del. quantity cm3/1000 strokes	: -	
hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: - : 500	
hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance	: - : 500 : 141.0	
hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: - : 500 : 141.0 : \(\tau \) 2.0 : \(\tau \) 4.0	

vaced speed this	•	100
Del. quantity		
cm3/1000 strokes	:	300.0
Tolerance		
cm3/1000 strokes	: +	- 20.0
Check tolerance		
cm3/1000s.	: +	- 24.0

LOW IDLE

Rack travel in mm : 4.10 Tolerance mm : + 0.30

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 17.07.97 Test oil : ISO 4113

Combination No. : 0 402 646 967

Injection pump

Pump designation : PE6P130A720RS7150

: -10

EP type number : 0 412 636 831

Governor

Governer design. : RQV250...900PA881-1

Governer no. : 0 421 813 982

Cust. part No. : 864988-P04 v.06.97

Customer—spec. information Customer : PENTA

Motor : TAMD 162 C

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Vibration

damper

(RoBo diaphragm) : 4.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 077

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 019

Opening pressure

bar : 208.5 Tolerance bar : + 1.5 Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter: 2.5

x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.65Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 9.40 Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

Tolerance : + 0.50

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

		† Tolerance mm : +- 0.30
Rack travel in mm Tolerance mm	: 11.60 : + 0.05	Rated speed rpm : 700 guide sleeve travel mm : 4.80
Del. quantity cm3/1000 strokes	: 336.0	Tolerance mm : +- 0.30
Tolerance cm3/1000 strokes	: +- 1.5	Rated speed rpm : 985 guide sleeve travel mm : 8.60
Check tolerance cm3/1000s.	: + 5.0	Tolerance mm : + 0.20
Spreed		+ GUIDE SLEEVE POSITION
Tolerance cm3/1000 strokes	: 6.0	control lever position degree : - 1 Rated speed rpm : 980
Check tolerance cm3/1000S.	: 10.0	Rack travel in mm : 16.50 Tolerance mm : +- 1.30
Rated speed rpm	: 250	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm Tolerance mm Del. quantity	: 4.20 : ← 0.10	+ Rated speed rpm : 700 + Aneroid pressure + hPa : 1000
cm3/1000 strokes Tolerance	: 19.5	Del. quantity
	: +- 2.5	+ Tolerance + cm3/1000 strokes : + 1.5
cm3/1000s. Spreed	: +- 5.0	Check tolerance cm3/1000s. : + 5.0
	: 5.0	+ Spreed + Tolerance + cm3/1000 strokes : 6.0
Check tolerance cm3/1000s.	: 8.0	+ cm3/1000 strokes : 6.0 + Check tolerance + cm3/1000s, : 10.0
(B) SETTING OF INJ	ECTION PUMP	
WITH GOVERNOR		CONTROL LEVER
GUIDE SLEEVE TRAVE	L	control lever position degree : 118.0
Rated speed rpm guide sleeve	: 925	tolerance degree : +- 4.0
travel mm	: 7.70	RATED SPEED
Tolerance mm	: +- 0.10	+ rack travel mm : 10.60 + Rated speed rpm : 930
Rated speed rpm guide sleeve	: 250	Tolerance 1/min : +- 5
travel mm Tolerance mm	: 1.10 : + 0.20	<pre>+ rack travel mm : 4.00 + Rated speed rpm : 1000 + Tolerance 1/min : +- 15</pre>
	: 350	+
guide sleeve travel mm	: 2.30	+ rack travel mm : 0.50 + Tolerance mm : + 0.50

Rated speed rpm : 1100

LOW IDLE

control lever

position degree : 67.0 tolerance degree : +- 4.0

Setting point w/out bumper spring

Rated speed rpm : 150

CRT mm min. : > 6.00

Testing:

Rated speed rpm : 250 rack travel mm : 4.20 Tolerance mm : +- 0.10

Rated speed rpm : 300

TORQUE CONTROL

Rated speed rpm : 700 rack travel mm : 11.60 Tolerance mm : +- 0.05

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 1000
rack travel mm : 11.60
Tolerance mm : +- 0.05

Rated speed rpm : 500
Pressure hPa : rack travel mm : 9.40
Tolerance mm : +- 0.20

MEASUREMENT

Rated speed rpm : 500

Pressure hPa : 400 rack travel mm : 9.80 Tolerance mm : + 0.20

Pressure hPa : 680 rack travel mm : 11.30 Tolerance mm : +- 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : Rated speed rpm : 700

Del. quantity cm3/1000 strokes : 228.0

Tolerance

cm3/1000 strokes : +- 1.5

Check tolerance

cm3/1000s. : +- 5.0

LOW IDLE

Rated speed rpm : 250

Rack travel in mm: 4.20
Tolerance mm: + 0.10
Del. quantity

cm3/1000 strokes : 19.5 Tolerance

cm3/1000 strokes : +- 2.5 Check tolerance

cm3/1000s. : +- 5.0 Spreed

Tolerance

cm3/1000 strokes : 5.0 Check tolerance

Check tolerance

cm3/1000s. : 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 23.07.97 Test oil : ISO 4113

Combination No. : 0 402 648 8123

Injection pump

Pump designation : PE8P12OA32OL878O1

: -10

EP type number : 0 412 628 851

Governor

Governer design. : RQ300/1050PA717 Governer no. : 0 421 801 258

Cust. part No. :

Customer-spec. information
Motor : 0M442 LA
Power KW : 320.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. $^{\circ}$ C : 40 Tolerance $^{\circ}$ C : + 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5

Overflow quantity

min. L/h : 110 Tolerance L/h : + 10.0

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5 Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter: 2.5

x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 5.25 Tolerance mm : +- 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 20.50 Tolerance mm : + 0.50

Firing order : 8-7-2-6-3

: - 5- 4- 1

Phasing : 0-45-90-135-180

: -225-270-315 Tolerance : +- 0.50

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

Start of delivery mark

Tolerance : \leftarrow 0.10

Check

tolerance *NW : + 0.75

Barrel no. : 8

BASIC SETTING

Rated speed rpm : 300

1
CONTROL LEVER
T CONTROL LEVER
+ control lever
<pre>position degre tolerance degr</pre>
T toterance degr
RATED SPEED rack travel mm
Rated speed rp Tolerance 1/mi
+
+ rack travel mm + Rated speed rp + Tolerance 1/mi
+ roterance min
rack travel mm
+ Tolerance mm + Rated speed rp
+
Ţ
+
+ LOW IDLE
+
<pre>+ control lever + position degre</pre>
tolerance degree
+
+ Setting point
Rated speed rp
COT
+ CRT mm min.
+ Testing:
+ Rated speed rp
+ rack travel mm
Tolerance mm
† rack travel mm
+ Rated speed rpi
+ Tolerance 1/min
Ī
+ TORQUE CONTROL
Rated speed rpr
+ rack travel mm + Tolerance mm
Total ance iikii
Rated speed rpr
+ rack travel mm + Tolerance mm
ד וטנפומוונפ ווווו

control lever position degree tolerance degree	
RATED SPEED rack travel mm Rated speed rpm Tolerance 1/min	: 13.40 : 1092 : +- 8
rack travel mm Rated speed rpm Tolerance 1/min	: 4.00 : 1150 : +- 15
rack travel mm Tolerance mm Rated speed rpm	: 0.75 : +- 0.75 : 1300
LOW IDLE	
LOW INCE	
control lever position degree tolerance degree	: 76.0 : +- 4.0
Setting point w/o	ut bumper spring
	at bampor opring
Rated speed rpm	
Rated speed rpm	: 300
Rated speed rpm	: 300 : > 7.50
Rated speed rpm CRT mm min. Testing: Rated speed rpm rack travel mm	: 300 : > 7.50 : 300 : 6.40 : + 0.10 : 2.00
Rated speed rpm CRT mm min. Testing: Rated speed rpm rack travel mm Tolerance mm rack travel mm Rated speed rpm	: 300 : > 7.50 : 300 : 6.40 : + 0.10 : 2.00 : 399
Rated speed rpm CRT mm min. Testing: Rated speed rpm rack travel mm Tolerance mm rack travel mm Rated speed rpm Tolerance 1/min	: 300 : > 7.50 : 300 : 6.40 : + 0.10 : 2.00 : 399
Rated speed rpm CRT mm min. Testing: Rated speed rpm rack travel mm Tolerance mm rack travel mm Rated speed rpm Tolerance 1/min TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 300 : > 7.50 : 300 : 6.40 : + 0.10 : 2.00 : 399 : + 20 : 1050 : 14.40 : + 0.10

		1	Tolerance	
		I	cm3/1000 strokes	: +- 2.0
ANEROID/ALTITUDE		+	Check tolerance	
COMPENSATOR TEST		†	cm3/1000s.	: +- 5.0
		Ī	Spreed Tolerance	
SETTING		Ţ	cm3/1000 strokes	: 7.0
		+	Check tolerance	
Rated speed rpm		+	cm3/1000s.	: 10.0
Pressure hPa	: 1150	†		
MEASUREMENT		Ī	Aneroid pressure	
TICHOOKETEIT		1	hPa	: -
Rated speed rpm	: 600	+	Rated speed rpm	: 500
	740	†	Del. quantity	4470.0
Pressure hPa rack travel mm	: 310 : -3.10	†	cm3/1000 strokes Tolerance	: 147.0
Tolerance mm	: + 0.10	I	cm3/1000 strokes	: +- 1.0
(0) (1) (1)	3.10	1	Check tolerance	
Pressure hPa	: 470	+	cm3/1000s.	: +- 4.0
rack travel mm	: -1.60	+	Spreed	
Tolerance mm	: +- 0.10	İ	Tolerance cm3/1000 strokes	: 7.0
· · · · · · · · · · · · · · · · · · ·		I	Check tolerance	. 7.0
Start interlock		+	cm3/1000s.	: 10.0
		+		
Rated speed rpm		†		
Rated speed rpm	: < 220	Ī	STARTING FUEL DEL	TVERY
Check		\downarrow	STANTING FOLL DEL	TATIL
speed 1/min	; > 80	+	Rated speed rpm	: 100
Check		+	Del. quantity	240.0
speed 1/min	: < 240	†	cm3/1000 strokes Tolerance	: 210.0
		I	cm3/1000 strokes	: +- 10.0
FUEL DELIVERY CHA	ARACTERISTICS	1	Check tolerance	, ,,,,
		+	cm3/1000s.	: +- 14.0
		†		
Aneroid pressure hPa		Ī		
Rated speed rpm	· : 1050	\perp		
Del. quantity		+	LOW IDLE	
cm3/1000 strokes	: 212.0	+		700
Tolerance	20	†	Rated speed rpm	: 300
cm3/1000 strokes Check tolerance	: 2.0	I	Rack travel in mm	6.40
cm3/1000s.	: +- 5.0	1	Tolerance mm	: +- 0.10
Spreed	- · · -	+	Del. quantity	
Tolerance		+	cm3/1000 strokes	: 19.0
cm3/1000 strokes	: 7.0	†	Tolerance cm3/1000 strokes	: +- 3.0
Check tolerance cm3/1000s.	: 10.0	Ī	Check tolerance	: ← 3.0
511137 TUUUS I	. 10.0	Ţ	cm3/1000s.	: +- 6.0
		+	Spreed	
Aneroid pressure		+	Tolerance	~ ^
hPa	. 050	†	cm3/1000 strokes	: 5.0
Rated speed rpm Del. quantity	: 850	İ	Check toledance cm3/1000s.	: 8.0
cm3/1000 strokes	: 217.0	I	UIII / 10003.	. 0.0
SHIP TOOD DEFORES		1		

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 17.07.97 Edition Test oil : ISO 4113

Combination No. : 0 402 648 974

Injection pump

Pump designation : PE8P120A320LS7875 EP type number : 0 412 628 881

Governor

Governer design. : RQ250/1150PA1122 : 0 421 801 704 Governer no.

Cust. part No. :

Customer-spec. information : DAEWOO Customer Motor : V2-8TC

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm 5.20 Tolerance mm : + 0.05Check : +- 0.10

tolerance mm

Rack travel in mm : 16.00 Tolerance mm : + 1.50

: 8-7-2-6-3 Firing order : - 5- 4- 1

: 0-45-90-135-180 Phasing

: -225-270-315 : +- 0.50Tolerance

Check

tolerance *NW : +- 0.75

Start of delivery mark

: +- 0.50 Tolerance

Check

: +- 0.75 tolerance "NW

Barrel no. : 8

BASIC SETTING

Rated speed rpm : 1150

Rack travel in mm : 13.60 Tolerance mm : \leftarrow 0.05

Del. quantity cm3/1000 strokes	: 208.0	+ Tolerance mm : +- 0.10
Tolerance		+ Rated speed rpm : 450 + guide sleeve
cm3/1000 strokes	: + 1.0	+ travel mm : 6.00 + Tolerance mm : + 0.10
Check tolerance cm3/1000s.	: ← 4.0	Rated speed rpm : 1370 guide sleeve
Spreed		travel mm : 11.50 Tolerance mm : +- 0.50
Tolerance cm3/1000 strokes	: 7.0	GUIDE SLEEVE POSITION
Check tolerance cm3/1000s.	: 10.0	+
		control lever position degree : 109 Rated speed rpm : 600
Rated speed rpm	: 300	+ Rack travel in mm : 20.00
Rack travel in mm Tolerance mm Del. quantity		Tolerance mm : +- 0.80
cm3/1000 strokes Tolerance	: 18.0	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes Check tolerance	: +- 3.0	Rated speed rpm : 1150 Aneroid pressure
cm3/1000s. Spreed	: +- 6.0	hPa : - Del. quantity
Tolerance cm3/1000 strokes	: 5.0	cm3/1000 strokes : 208.0 + Tolerance
Check tolerance cm3/1000s.	: 8.0	cm3/1000 strokes : + 1.0 Check tolerance
<u></u>		cm3/1000s. : +- 4.0 + Spreed
(B) SETTING OF IN WITH GOVERNOR	JECTION PUMP	Tolerance cm3/1000 strokes : 7.0 Check tolerance
GUIDE SLEEVE TRAV		cm3/1000s. : 10.0
Rated speed rpm	: 1207	
guide sleeve travel mm	: 6.36	CONTROL LEVER
Tolerance mm	: +- 0.10	control lever position degree : 34.0
Rated speed rpm guide sleeve	: 300	tolerance degree : + 4.0
travel mm Tolerance mm	: 2.39 : + 0.10	+ control lever + position degree : 95.0
Rated speed rpm	: 650	tolerance degree : + 4.0
guide sleeve travel mm	: 6.00	+ RATED SPEED + rack travel mm : 12.60
Tolerance mm	: +- 0.10	+ Rated speed rpm : 1202 + Tolerance 1/min : +- 8
Rated speed rpm guide sleeve		rack travel mm : 4.00
travel mm	: 5.26	+ Rated speed rpm : 1280

Tolerance 1/min : +- 15 rack travel mm : 9.00 : +- 0.20 Tolerance mm rack travel mm : 0.50 : + 0.50 Tolerance mm **MEASUREMENT** Rated speed rpm : 1350 Rated speed rpm : 500 Pressure hPa : 650 : 12.30 650 rack travel mm : +- 0.20 LOW IDLE Tolerance mm 250 Pressure hPa : control lever rack travel mm 10.00 Tolerance mm : +- 0.05 position degree : 75.0 tolerance degree : +- 4.0 control lever Start interlock position degree : 14.0 Rated speed rpm :> tolerance degree : + 4.0 205 Rated speed rpm : < 240 Setting point w/out bumper spring Check speed 1/min : > 185 Rated speed rpm : 200 CRT mm min. :> 9.20FUEL DELIVERY CHARACTERISTICS Testing: 300 Aneroid pressure Rated speed rpm : rack travel mm : 5.80 hPa Tolerance mm : + 0.10Rated speed rpm : 650 Del. quantity 2.00 cm3/1000 strokes : 226.0 rack travel mm Rated speed rpm : 375 Tolerance Tolerance 1/min : + 20 cm3/1000 strokes : +- 3.0Check tolerance cm3/1000s. : +- 6.0 TORQUE CONTROL 1150 Rated speed rpm Aneroid pressure rack travel mm : 13.60 : +- 0.05 hPa Tolerance mm Rated speed rpm : 500 Rated speed rpm : 650 Del. quantity cm3/1000 strokes : 137.0 13.60 rack travel mm : Tolerance mm : **←** 0.05 Tolerance cm3/1000 strokes : +-1.0 Check tolerance ANEROID/ALTITUDE cm3/1000s. : -- 4.0 COMPENSATOR TEST STARTING FUEL DELIVERY SETTING 500 Del. quantity Rated speed rpm : 1500 cm3/1000 strokes : Pressure hPa Tolerance rack travel mm : 13.60 cm3/1000 strokes : + 10.0: +- 0.05 Tolerance mm Check tolerance cm3/1000s. : +- 14.0 Rated speed rpm 500 Pressure hPa

LOW IDLE

Rated speed rpm	:		300	
Rack travel in mm Tolerance mm Del. quantity	•	+	5.80 0.10	
cm3/1000 strokes	:		18.0	
Tolerance cm3/1000 strokes	•	+	3.0	
Check tolerance	•		3.0	
cm3/1000s.	:	+-	6.0	
Spreed Tolerance				
cm3/1000 strokes	:		5.0	
Check tolerance cm3/1000s.	:		8.0	

Note remarks

Refer to Service Info for test and adjustment instructions.

See microcard(s) W400/...

Edition

: 21.07.97

Test oil : ISO 4113

Combination No. : 0 402 736 908

Injection pump

Pump designation : PES6P120A120RS7413

EP type number : 0 412 726 962

Governor

Governer design. : RQV350...1250PA1280K

Governer no. : 0 421 815 521

Cust. part No. : 3283516

Customer-spec. information

Customer : CUMMINS : 6BTAA Motor

Power KW

: 198.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C 40

Tolerance °C : +- 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0

Tolerance bar : + 0.1

Overflow quantity

min. l/h : 260

Tolerance l/h: + 20.0

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

: 208.5 bar Tolerance bar : +- 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : + 1.0

Prestroke mm : +Tolerance mm : +-3.75 : +- 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm: 12.50

Tolerance mm : \leftarrow 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

: +- 0.50 Tolerance

Check

tolerance *NW : +- 0.75

Start of delivery blocking

"NW after s.o.d. : 5.00 : +- 0.50 Tolerance

Check

: +- 0.75 tolerance °NW

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1250

	1		
Rack travel in mm : 12. Tolerance mm : +- 0.		Rated speed rpm guide sleeve travel mm	: 1540 : 13.50
Del. quantity cm3/1000 strokes : 137	?.0	Tolerance mm	: +- 0.50
Tolerance cm3/1000 strokes : +- 1	1.0	GUIDE SLEEVE POSIT	TION
Check tolerance cm3/1000s. : +- 4	4.0	control lever position degree Rated speed rpm	: - 1 : 1360
Spreed	<u> </u>	Rack travel in mm	
Tolerance cm3/1000 strokes : 5	5.0	Tolerance mm	: + 2.70
Check tolerance cm3/1000s. : 9	2.0	FULL LOAD DELIVERY	Y AT FULL LOAD STOP
	<u>†</u>	Rated speed rpm Aneroid pressure	: 1250
Rated speed rpm : 360	, ‡	hPa Del. quantity cm3/1000 strokes	: 1500
Rack travel in mm : 6. Tolerance mm : + 0.	70	Tolerance cm3/1000 strokes	
Del. quantity	+	Check tolerance	
Tolerance	5.0 +	cm3/1000s. Spreed	: +- 4.0
<pre>cm3/1000 strokes : +- 3 Check tolerance</pre>	3.0 +	Tolerance cm3/1000 strokes	: 5.0
cm3/1000s. : +- 6 Spreed	5.0	Check tolerance cm3/1000s.	: 9.0
Tolerance	'.o +		
Check tolerance	+		
cm3/1000s. : 11	.0 +	CONTROL LEVER	
(B) SETTING OF INJECTION P WITH GOVERNOR	PUMP	control lever position degree tolerance degree	: 65.0 : +- 4.0
GUIDE SLEEVE TRAVEL	<u> </u>	control lever position degree tolerance degree	
Rated speed rpm : 1314 guide sleeve	·	RATED SPEED	
travel mm : 10. Tolerance mm : + 0.		rack travel mm Rated speed rpm	: 11.40 : 1295
Rated speed rpm : 350	+	Tolerance 1/min	: +- 5
guide sleeve travel mm : 1.		rack travel mm Rated speed rpm Tolerance 1/min	: 4.00 : 1385 : +- 15
Tolerance mm : +- 0.	+	Check	
Rated speed rpm : 870 guide sleeve	‡	speed 1/min	: +- 20
travel mm : 6. Tolerance mm : + 0.		rack travel mm Tolerance mm	: 0.50 : +- 0.50

Rated speed rpm	: 1500	+ MEASUREMENT
		Rated speed rpm : 1250
LOW IDLE		Pressure hPa : 750 rack travel mm : 11.80 Tolerance mm : + 0.20
control lever position degree tolerance degree		+ Pressure hPa : 350 + rack travel mm : 10.50
control lever	4.0	Tolerance mm : + 0.05
position degree tolerance degree	: 20.0 : + 4.0	Start interlock
_		+
Rated speed rpm	out bumper spring	+ Rated speed rpm : > 100 + Rated speed rpm : < 320
		T Check
CRT mm min.	: > 9.40	+ speed 1/min : > 80
Testing:		+ FUEL DELIVERY CHARACTERISTICS
Rated speed rpm		+
rack travel mm Tolerance mm		Aneroid pressure
		+ hPa : 1500
Rated speed rpm	: 350	+ Rated speed rpm : 1100 + Del. quantity + cm3/1000 strokes : 131.0
TORQUE CONTROL		+ Tolerance
Rated speed rpm	: 1250	+ cm3/1000 strokes : +- 3.0
rack travel mm Tolerance mm		+ Check tolerance + cm3/1000S. : +- 6.0 + Spreed
Rated speed rpm	: 1100_	+ Tolerance
rack travel mm Tolerance mm	: 12.00	+ cm3/1000 strokes : 12.0 + Check tolerance
		cm3/1000s. : 16.0
Rated speed rpm rack travel mm	: 800 : 11.10	İ
Tolerance mm	: + 0.15	Aneroid pressure
		+ hPa : 1500 + Rated speed rpm : 800
ANEROID/ALTITUDE		+ Del. quantity
COMPENSATOR TEST		+ cm3/1000 strokes : 120.0 + Tolerance
SETTING		+ cm3/1000 strokes : + 3.0 + Check tolerance
Rated speed rpm	: 1250	+ cm3/1000s. : +- 6.0
Pressure hPa	: 1500	+
rack travel mm Tolerance mm	: 12.40 : +- 0.05	+ Aneroid pressure + hPa : -
ioterance (III)		Rated speed rpm : 500
Rated speed rpm Pressure hPa	: -	Del. quantity cm3/1000 strokes : 100.0
rack travel mm Tolerance mm	: 9.90 : +- 0.20	+ Tolerance + cm3/1000 strokes : +- 2.0

Check tolerance cm3/1000s. : +- 4.0 STARTING FUEL DELIVERY Set starting CRT at K-cam. Rated speed rpm 100 10.60 rack travel mm : +- 0.50 Tolerance mm Del. quantity cm3/1000 strokes : 105.0 Tolerance cm3/1000 strokes : +- 20.0Check tolerance cm3/1000s. : +- 24.0 LOW IDLE Rated speed rpm : 360 Rack travel in mm: 6.70 : +- 0.10 Tolerance mm Del. quantity cm3/1000 strokes : 25.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000S. : ← 6.0 Spreed Tolerance 7.0 cm3/1000 strokes : Check tolerance cm3/1000s. 11.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 27,05,97 Test oil : ISO 4113

Combination No. : 0 402 736 909

Injection pump

Pump designation : PES6P12OA12ORS7413 EP type number : 0 412 726 962

Governor

Governer design. : RQV350...1250PA1281K

Governer no. : 0 421 815 522

Cust. part No. : 3283517

Customer-spec. information Customer : CUMMINS Motor : 6BTAA Power KW : 173.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C Tolerance °C : +- 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : Tolerance bar : + 0.1

Overflow quantity
min. L/h : 125
Tolerance L/h : +- 20.0

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

: 208.5 Tolerance bar : +- 1.5 Test Lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.75 Tolerance mm : +- 0.05 Check

tolerance mm : + 0.10

Rack travel in mm: 12.50

Tolerance mm : + 0.50

Firing order : 1-5- 3- 6- 2-

: 4

Phasing : 0-60-120-180-240

: -300

: +- 0.50 Tolerance

Check

tolerance °NW : + 0.75

Start of delivery blocking

*NW after s.o.d. : 5.00 Tolerance : + - 0.50

Check

tolerance *NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1250

		1
Rack travel in mr Tolerance mm	m: 13.70 :+- 0.05	Rated speed rpm : 1540 guide sleeve travel mm : 13.50
Del. quantity cm3/1000 strokes	: 154.0	Tolerance mm : + 0.50
Tolerance cm3/1000 strokes	: + 1.0	GUIDE SLEEVE POSITION
Check tolerance cm3/1000s.	: +- 4.0	control lever position degree : - 1 Rated speed rpm : 1350
Spreed		+
Tolerance cm3/1000 strokes	: 5.0	Rack travel in mm: 13.10 Tolerance mm: + 2.70
Check tolerance cm3/1000s.	· 9.0	FULL LOAD DELIVERY AT FULL LOAD STOP
		Rated speed rpm : 1250 Aneroid pressure hPa : 1500
Rated speed rpm	: 360	Del. quantity cm3/1000 strokes : 154.0
Rack travel in mo	n: 6.40	Tolerance
Tolerance mm	1 1 1	- cm3/1000 strokes : +- 1.0
Del. quantity		+ Check tolerance
cm3/1000 strokes	: 25.0	+ cm3/1000s. : +- 4.0
Tolerance	7.0	+ Spreed
cm3/1000 strokes Check tolerance	: ← 3.0	+ Tolerance + cm3/1000 strokes : 5.0
cm3/1000s.	: +- 6.0	Check tolerance
Spreed		+ cm3/1000s. : 9.0
Tolerance		+
cm3/1000 strokes	: 7.0	†
Check tolerance cm3/1000s.	: 11.0	CONTROL LEVER
CIID7 10003.	. 77.0	I CONTROL LEVER
		+ control lever
(B) SETTING OF IN	NJECTION PUMP	position degree : 66.0
WITH GOVERNOR		tolerance degree : +- 4.0
		t control lever
GUIDE SLEEVE TRAV	/EL	position degree : 120.0
		tolerance degree : + 4.0
Rated speed rpm	: 1315	† DATES COEES
guide sleeve travel mm	: 10.39	+ RATED SPEED + rack travel mm : 12.70
Tolerance mm	: + 0.15	Rated speed rpm : 1290
1000101100		+ Tolerance 1/min : +- 5
Rated speed rpm	: 350	rack travel mm : 4.00
guide sleeve travel mm	: 2.05	Rated speed rpm : 1390
Tolerance mm	: +- 0.20	+ Tolerance 1/min : +- 15
		Check
Rated speed rpm guide sleeve	: 860	+ speed 1/min : +- 20
travel mm	: 6.01	rack travel mm : 0.50
Tolerance mm	: 0.25	+ Tolerance mm : +- 0.50

Rated speed rpm	: 1500	MEASUREMENT
	‡	Rated speed rpm : 1250
LOH IDLE	+	Pressure hPa : 1050 rack travel mm : 13.40 Tolerance mm : + 0.20
control lever position degree tolerance degree control lever		Pressure hPa : 400 rack travel mm : 10.30 Tolerance mm : + 0.05
position degree tolerance degree	: 24.0 : ← 4.0	Start interlock
Setting point w/c	+	Rated speed rpm : > 100 Rated speed rpm : < 300
Rated speed rpm	+	Check speed 1/min : > 80
CRT mm min. Testing:	: > 8.60	<pre>speed 1/min : > 80 Check speed 1/min : < 320</pre>
Rated speed rpm	: 360	
rack travel mm Tolerance mm	: 6.40 +	FUEL DELIVERY CHARACTERISTICS
Rated speed rpm	: 350	Aneroid pressure hPa : 1500 Rated speed rpm : 750
TORQUE CONTROL Rated speed rpm		Del. quantity cm3/1000 strokes : 144.0
rack travel mm Tolerance mm	: 13.70 : + 0.05	Tolerance cm3/1000 strokes : +- 3.0 Check tolerance
Rated speed rpm rack travel mm Tolerance mm	: 12.20	cm3/1000s. : +- 6.0 Spreed Tolerance
Rated speed rpm		cm3/1000 strokes : 12.0 Check tolerance cm3/1000s. : 16.0
rack travel mm Tolerance mm		Cm3/10005. : 16.0
ANEROID/ALTITUDE	+	Aneroid pressure hPa : -
COMPENSATOR TEST	1	Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 97.0
SETTING	1	Tolerance cm3/1000 strokes : +- 2.0
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 1250 : 1500 : 13.70 : + 0.05	Check tolerance cm3/1000s. : +- 4.0
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 1250 : - : 9.80 : + 0.20	STARTING FUEL DELIVERY Set starting CRT at K-cam.
	•	

Rated speed rpm rack travel mm	:	100 9.90
Tolerance mm	: +-	0.50
Del. quantity cm3/1000 strokes	:	75.0
Tolerance cm3/1000 strokes	: +-	20.0
Check tolerance cm3/1000s.	; +-	24.0

LOW IDLE

Rated speed rpm : 360 Rack travel in mm: 6.40 Tolerance mm : **←** 0.10 Del. quantity cm3/1000 strokes : 25.0 Tolerance cm3/1000 strokes : \leftarrow 3.0 Check tolerance cm3/1000s. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 7.0 Check tolerance cm3/1000s. 11.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 17.07.97 : ISO 4113

Combination No. : 9 400 087 500

Injection pump

Pump designation : PES6P120A720LS7257

: -10

EP type number

: 9 400 087 086

Governor

Governer design. : RQV300...950PA1242

Governer no.

+ 9 420 080 387

Cust. part No. : 0260746602

Customer-spec. information

Customer : MBB:

Motor

: OM 447 LA

Power KW

: 264.8

TEST BENCH REQUIREMENTS

Inlet line

: 4.1

Test oil inlet

temp. °C

Tolerance °C

2.0

Overflow valve : 1 417 413 047

Inlet press. bar :

2.0

Test nozzle holde

assembly

: 1 688 901 105

Opening pressure

208.5

Tolerance bar

: +- 1.5

Test lines

: 1 680 750 075

Outside diameter :

8.0

x inside diameter : 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm 4.65

Tolerance mm

· +- 0.05

Check

tolerance mm

· +- 0.10

Rack travel in mm: 21.00

Firing order

: 6-2-4-1-5-

: 0-60-120-180-240 Phasing

: -300

Tolerance

: +- ৪%

Check

toleränce "NW

: +~ 0.75

BASIC SETTING

Rated speed rpm

600

Rack travel in mm: 14.25

· +- 0.05 Toterance mm

Del. quantity

cm3/1000 strokes :

275.5

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Check tolerance

cm3/1000s.

: +- 4.0

Spreed

A01

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 23.07.97 : ISO 4113

Combination No. : 0 402 746 602

Injection pump

Pump designation : PES6P120A320RS7359

: -1

EP type number : 0 412 726 949

Governor

Governer design. : RQ275/1050PA1217-1

Governer no. : 0 421 801 798

Cust. part No. : CCEP 5152A 66-229

Customer-spec, information

Customer : RENAULT V.I.

Motor

: MIDRO62045 R41

Power KW

223.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C

Tolerance *C : +- 2.0

Overflow valve : 2 417 413 078

Inlet press. bar :

2.5

Tolerance bar : + 0.1

Test nozzle holde

assembly

: 1 688 901 105

Opening pressure

bar

208.5

Tolerance bar : ← 1.5

Test Lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar :

Tolerance bar : + 1.0

Prestroke mm : 4.70 Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm: 20.25

Tolerance mm : + 0.75

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance

: **←** 0.50

Check

tolerance °NW : → 0.75

Start of delivery mark

*NW after s.o.d. : -0.45

Tolerance : +- 0.50

Check

tolerance °NW : + 0.75

Barrel no. : 1

CRT ZERO POSITION

Rack travel in mm: 13.40

Tolerance mm : + 0.05

BASIC SETTING

1	Tolerance mm : +- 0.10
Rated speed rpm : 600	Total arise iiii
<u> </u>	Rated speed rpm : 401
Tolerance mm : +- 0.05	guide sleeve
<u> </u>	travel mm : 5.00
Del. quantity	Tolerance mm : +- 0.10
cm3/1000 strokes : 285.0	Rated speed rpm : 480
Tolerance	Rated speed rpm : 480 guide sleeve
cm3/1000 strokes : +- 1.0	travel mm : 6.00
1.5	Tolerance mm : +- 0.10
Check tolerance	
cm3/1000s. : + 4.0	Rated speed rpm : 1330
	guide sleeve
Spreed	travel mm : 11.50
+	Tolerance mm : + 0.50
Tolerance	
cm3/1000 strokes : 5.0	CUIDE OF SELE DOCUTION
Charle talanana	GUIDE SLEEVE POSITION
Check tolerance + cm3/1000s. : 9.0	
	control lever
<u> </u>	position degree : 109
1	Rated speed rpm : 600
Rated speed rpm : 300	nacca opeca i più : ooo
1	Rack travel in mm : 20.00
Rack travel in mm: -7.60	Tolerance mm : +- 0.80
Tolerance mm : + 0.10 +	
Del. quantity +	
cm3/1000 strokes : 23.0 +	FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance	
cm3/1000 strokes : +- 2.0 +	Rated speed rpm : 600
Check tolerance	Aneroid pressure
cm3/1000s. : + 5.0 + 5.0	hPa : 1000
Tolerance	Del. quantity cm3/1000 strokes : 285.0
cm3/1000 strokes : 8.0	Tolerance
Check tolerance	cm3/1000 strokes : +- 1.0
cm3/1000s. : 12.0	Check tolerance
+	cm3/1000s. : +- 4.0
 	Spreed
(B) SETTING OF INJECTION PUMP	Tolerance
WITH GOVERNOR +	cm3/1000 strokes : 5.0
+	Check tolerance
CHARE OF EARLY TOWNER	cm3/1000s. : 9.0
GUIDE SLEEVE TRAVEL	
Rated speed rpm : 1122	
guide steeve	CONTROL LEVER
travel mm : 6.36	VOITHING GEVEN
Tolerance mm : +- 0.15	control lever
+	position degree : 276.0
Rated speed rpm : 300	tolerance degree : +- 4.0
guide sleeve +	-
travel mm : 2.18 +	RATED SPEED
Tolerance mm : + 0.20	rack travel mm : -1.00
1050	Rated speed rpm : 1115
Rated speed rpm : 1050	Tolerance 1/min : +- 15
guide sleeve + travel mm : 6.00 +	rack travel mm : -9.40
.rave) (m) : 0.31) +	LOUR LEGVEL DAD : T7.40

Rated speed rpm : 1240 Tolerance 1/min : +- 5 rack travel mm : -12.90 Tolerance mm : + 0.50 Rated speed rpm : 1350 LOW IDLE control lever position degree : 255.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 200 CRT mm min. : > -4.90Testing: Rated speed rpm 300 : -7.60 rack travel mm : +- 0.10 Tolerance mm rack travel mm : -11.30 Rated speed rpm : 395 Tolerance 1/min : +-TORQUE CONTROL Rated speed rpm : 600 : +- 0.05 Tolerance mm Rated speed rpm : 1050 Tolerance mm : + 0.10 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 500 Pressure hPa : 1000 500 Rated speed rpm Pressure hPa -2.45rack travel mm Tolerance mm : +- 0.20 MEASUREMENT Rated speed rpm : 500

Pressure hPa : 400 rack travel mm : -0.70 : +- 0.15 Tolerance mm : 240 : -1.65 Pressure hPa rack travel mm Tolerance mm : + 0.05 Start interlock Rated speed rpm : > 100 Rated speed rpm : < 195 Check speed 1/min :> 80 Check speed 1/min : < 215 FUEL DELIVERY CHARACTERISTICS Aneroid pressure 1000 hPa Rated speed rpm : 1050 Del. quantity cm3/1000 strokes : 293.0 Tolerance cm3/1000 strokes : +- 3.0Check tolerance cm3/1000s. : +- 6.0 Aneroid pressure hPa Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 174.0 Tolerance cm3/1000 strokes : +- 1.0Check tolerance cm3/1000s. 4.0 STARTING FUEL DELIVERY Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 145.0 Tolerance cm3/1000 strokes : +- 15.0Check tolerance : +- 19.0 cm3/1000s.

LOW IDLE

003

Rated speed rpm	:	300
Rack travel in mm Tolerance mm Del. quantity	:	→ -7.60 → 0.10
cm3/1000 strokes Tolerance	:	23.0
cm3/1000 strokes	:	 2.0
Check tolerance cm3/1000s. Spreed	:	← 5.0
Tolerance cm3/1000 strokes	:	8.0
Check tolerance cm3/1000s.	:	12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 21.07.97 Test oil : ISO 4113

Combination No. : 0 402 746 608

Injection pump

Pump designation : PES6P12OA32ORS7359 EP type number : 0 412 726 925

Governor

Governer design. : RQ275/1050PA1275 Governer no. : 0 421 801 805

Cust. part No. : CCEP 5157A 66-222

Customer-spec. information

Customer : RENAULT V.I.
Motor : MIDR062045 F/C41

Power KW : 152.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 078

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Overflow quantity

min. l/h : 220 Tolerance l/h : +- 10.0

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 4.70 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 20.25 Tolerance mm : + 0.75

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance $^{\circ}NW$: + 0.75

Start of delivery mark

 $^{\circ}$ NW after s.o.d. : -0.95

Tolerance : +- 0.50

Check

tolerance *NW : +- 0.75

Barrel no. : 1

CRT ZERO POSITION

		1	
Rack travel in mm Tolerance mm		Rated speed rpm : 1050 guide sleeve	
		travel mm : 6.	
BASIC SETTING		Tolerance mm : +- 0.	
		+ Rated speed rpm : 648	3
Rated speed rpm	: 1050	+ guide sleeve	
		+ travel mm : 6.	.18
Del. quantity cm3/1000 strokes	: 176.0	Tolerance mm : + 0.	
		+ Rated speed rpm : 375	5
Tolerance	4.0	+ guide sleeve	00
cm3/1000 strokes	: + 1.0	travel mm : 5.	
Check tolerance		† Tolerance mm : + 0.	. 10
cm3/1000s.	: +- 4.0	Rated speed rpm : 450	n
(11137 10003)	. +- 4.0	+ guide sleeve	J
Spreed		travel mm : 6.	nn
opi eed		Tolerance mm : + 0.	
Tolerance		- Total area man	, 10
cm3/1000 strokes	: 5.0	+ Rated speed rpm : 1300	n
	. 3.0	+ guide sleeve	
Check tolerance	-	+ travel mm : 11.	.50
cm3/1000s.	: 9.0	+ Tolerance mm : +- 0.	.50
		+	
		+ Rated speed rpm : 873	3
		+ guide sleeve	
Rated speed rpm	: 275	+ travel mm : 6.	
		+ Tolerance mm : + 0.	.10
Rack travel in mm		†	
Tolerance mm	: ← 0.10	CUIDE OF EERE BOOTTON	
Del. quantity	. 28.0	GUIDE SLEEVE POSITION	
cm3/1000 strokes	: 28.0	†	
Tolerance cm3/1000 strokes	20	- control lever	
Check tolerance	. +- 2.0		109
cm3/1000s.	: +- 5.0	Rated speed rpm : 500	
Spreed	. 9.0	Added Speed 1 pm	9
Tolerance		Rack travel in mm: 20.	.00
cm3/1000 strokes	: 8.0	+ Tolerance mm : +- O	
Check tolerance		+	
cm3/1000s.	: 12.0		
		+ FULL LOAD DELIVERY AT FULL	L LOAD STOP
(B) SETTING OF IN	JECTION PUMP	Rated speed rpm : 1050	0
WITH GOVERNOR		+ Aneroid pressure	
		→ hPa : 1000	0
		+ Del. quantity	
GUIDE SLEEVE TRAVI	EL		6.0
		+ Tolerance	
Rated speed rpm	: 1122		1.0
guide sleeve	7.64	+ Check tolerance	
travel mm	: 7.06		4.0
Tolerance mm	: +- 0.15	+ Spreed	
Data d amaz d man	. 275	Tolerance cm3/1000 strokes :	5.0
Rated speed rpm	: 275	+ cm3/1000 strokes : !	ن. ر
guide sleeve travel mm	: 2.44		9.0
Tolerance mm	: + 0.20	T (1110/10003.	,.u
OLEI WILL HIII	. , 0.20	1	

CONTROL LEVER

control lever

position degree : 276.0 tolerance degree : +- 4.0

RATED SPEED

rack travel mm : -1.00
Rated speed rpm : 1115
Tolerance 1/min : +- 5

rack travel mm : -7.70
Rated speed rpm : 1205
Tolerance 1/min : +- 15

rack travel mm : -11.20
Tolerance mm : + 0.50
Rated speed rpm : 1350

LOW IDLE

control lever

position degree : 256.0 tolerance degree : +- 4.0

Setting point w/out bumper spring

Rated speed rpm : 200

CRT mm min. : < -4.20

Testing:

Rated speed rpm : 275
rack travel mm : -6.10
Tolerance mm : +- 0.10

rack travel mm : -9.60 Rated speed rpm : 375 Tolerance 1/min : +- 20

TORQUE CONTROL

Rated speed rpm : 1050

Rated speed rpm : 600 rack travel mm : 1.00 Tolerance mm : + 0.10

Rated speed rpm : 800 rack travel mm : 0.80 Tolerance mm : +- 0.20

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING.

Rated speed rpm : 500
Pressure hPa : 1000
rack travel mm : 1.00
Tolerance mm : +- 0.10

Rated speed rpm : 500
Pressure hPa : rack travel mm : -0.75
Tolerance mm : +- 0.20

MEASUREMENT

Rated speed rpm : 500

Pressure hPa : 280 rack travel mm : 0.65 Tolerance mm : + 0.15

Pressure hPa : 160 rack travel mm : -0.15 Tolerance mm : +- 0.05

Start interlock

Rated speed rpm : > 100 Rated speed rpm : < 195

Check

speed 1/min :> 80 Check speed 1/min : < 215

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : 1000 Rated speed rpm : 600 Del. quantity

cm3/1000 strokes : 193.0 Tolerance

cm3/1000 strokes : +- 3.0

Check tolerance cm3/1000s. : +- 6.0

Aneroid pressure

hPa : -Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 149.0Tolerance cm3/1000 strokes : +- 1.0Check tolerance cm3/1000s.4.0 STARTING FUEL DELIVERY Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 155.0 Tolerance cm3/1000 strokes : +- 15.0Check tolerance cm3/1000s.: +- 19.0 LOW IDLE Rated speed rpm : 275 Rack travel in mm: -6.10: +- 0.10 Tolerance mm Del. quantity cm3/1000 strokes : 28.0 Tolerance cm3/1000 strokes : +- 2.0Check tolerance cm3/1000S. : ← 5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance 12.0 cm3/1000s. End of test specification sheet

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 17.07.97

Test oil

: ISO 4113

Combination No. : 0 402 746 6090

Injection pump

Pump designation : PES6P130A720RS7411

EP type number : 0 412 736 808

Governor

Governer design. : RQ275/950PA1274

Governer no. : 0 421 801 807

Cust. part No. : 221 575

Customer-spec. information

Customer : RABA

Motor

: siehe Bemerkung

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C

Tolerance °C

: +- 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 1.5

Tolerance bar : +-

Test nozzle holde

assembly

: 1 688 901 105

Opening pressure

bar

: 208.5

Tolerance bar : +- 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x length mm : 600

x inside diameter :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm

3.0

Tolerance mm

: 5.50 : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm: 20.50

Tolerance mm: : +- 0.50

Firing order : 1-5-3-6-2-

Phasing

: 0-60-120-180-240

: -300

Tolerance

: +- 0.50

Check

tolerance *NW : **←** 0.75

Start of delivery mark

Check

Tolerance : \leftarrow 0.50

tolerance *NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 600

Rack travel in mm : 13.10 Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 263.0

009

Tolerance	+ guide sleeve
cm3/1000 strokes : +- 1.0	travel mm : 6.00 Tolerance mm : +- 0.10
Check tolerance cm3/1000s. : +- 4.0	+ Rated speed rpm : 1290
Spreed	+ guide sleeve + travel mm : 11.50
Tolerance	Tolerance mm : +- 0.50
cm3/1000 strokes : 5.0	GUIDE SLEEVE POSITION
Check tolerance	+
cm3/1000s. : 9.0	+ Rated speed rpm : 1143
	+ Rack travel in mm : 12.10 + Tolerance mm : +- 1.30
Rated speed rpm : 275	1.50
Rack travel in mm : 4.20 Tolerance mm : +- 0.10	FULL LOAD DELIVERY AT FULL LOAD STOP
Del. quantity	Rated speed rpm : 600
cm3/1000 strokes : 24.0 Tolerance	+ Aneroid pressure + hPa : 1500
cm3/1000 strokes : +- 3.0 Check tolerance	+ Del. quantity + cm3/1000 strokes : 263.0
cm3/1000s. : +- 6.0	Tolerance + cm3/1000 strokes : +- 1.0
Spreed Tolerance	+ Check tolerance
cm3/1000 strokes : 8.0 Check tolerance	+ cm3/1000s. : + 4.0 + Spreed
cm3/1000s. : 12.0	Tolerance cm3/1000 strokes : 5.0
(B) SETTING OF INJECTION PUMP	Check tolerance cm3/1000s. : 9.0
WITH GOVERNOR	- CM3/10003 9.0
GUIDE SLEEVE TRAVEL	CONTROL LEVER
Rated speed rpm : 1103	control lever
guide sleeve travel mm : 6.54	<pre>position degree : 34.0 tolerance degree : +- 4.0</pre>
Tolerance mm : +- 0.15	control lever
Rated speed rpm : 275	position degree : 95.0
guide sleeve travel mm : 2.06	tolerance degree : +- 4.0
Tolerance mm : + 0.20	+ RATED SPEED + rack travel mm : 12.10
Rated speed rpm : 1050	+ Rated speed rpm : 1095
guide sleeve travel mm : 6.00	Tolerance 1/min : +- 5
travel mm : 6.00 Tolerance mm : +- 0.10	rack travel mm : 4.00 Rated speed rpm : 1190
Rated speed rpm : 355 guide sleeve	Tolerance 1/min : +- 15
travel mm : 4.25	rack travel mm : 0.50
Tolerance mm : +- 0.10	+ Tolerance mm : + 0.50 + Rated speed rpm : 1300
Rated speed rpm : 450	+

D10

LOW IDLE

control lever position degree : 73.0 tolerance degree : +- 4.0

control lever

position degree : 11.0 tolerance degree : + 4.0

Setting point w/out bumper spring

Rated speed rpm : 175

CRT mm min. : > 6.80

Testing:

Rated speed rpm : 275 rack travel mm : 4.20 Tolerance mm : +- 0.10

rack travel mm : 2.00 Rated speed rpm : 335 Tolerance 1/min : + 20

TORQUE CONTROL

Rated speed rpm : 600 rack travel mm : 13.10 Tolerance mm : + 0.05

Rated speed rpm : 1050 rack travel mm : 13.10 : +- 0.10 lolerance mm

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500 Pressure hPa : 1500 rack travel mm : 13.10 Tolerance mm : +- 0.05

Rated speed rpm : 500 Pressure hPa 8.20 rack travel mm : : +- 0.20 Tolerance mm

MEASUREMENT

Rated speed rpm : 500

Pressure hPa : 600 rack travel mm : 12.05 Tolerance mm : +- 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

1500 Rated speed rpm : 1050

Del. quantity

cm3/1000 strokes : 252.0

Tolerance

cm3/1000 strokes : +- 3.0

Check tolerance

cm3/1000s. : +- 6.0

Aneroid pressure

Rated speed rpm : 500

Del. quantity

cm3/1000 strokes : 147.0

Tolerance

cm3/1000 strokes : +- 2.0

Check tolerance

cm3/1000s. : -4.0

STARTING FUEL DELIVERY

ESS test: With 24 V solenoid activated, rack must reach start position in max. control lever setting.

Rated speed rpm : 100 rack travel mm : 20.50

Del. quantity

cm3/1000 strokes : 110.0

Tolerance

cm3/1000 strokes : +- 20.0

Check tolerance

: +- 24.0 cm3/1000s.

LOW IDLE

Rated speed rpm : 275

D11

Rack travel in mm Tolerance mm Del. quantity	: : +-	4.20 0.10
cm3/1000 strokes Tolerance	:	24.0
cm3/1000 strokes Check tolerance	: +-	3.0
cm3/1000s.	: +-	6.0
Tolerance cm3/1000 strokes Check tolerance	:	8.0
cm3/1000s.	:	12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 23.07.97 : ISO 4113

Combination No. : 0 402 746 650

Injection pump

Pump designation : PES6P120A320RS7344 EP type number : 0 412 726 914

Governor

Governer design. : RQ275/1050PA999-6

Governer no. : 0 421 801 785

Cust. part No. : CCEP 5151A 66-230

Customer-spec. information

Customer : RENAULT V.I.

Motor : MIDR 062045 M41
Power KW : 250.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 2 417 413 071

Inlet press. bar : 2.5

Overflow quantity

min. l/h : 145 Tolerance l/h : +- 10.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure bar : 208.5 Tolerance bar : ← 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter :

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0

Tolerance bar : +- 1.0

Prestroke mm : 4.50 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 11.00

Tolerance mm : \leftarrow 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

: +- 0.50 Tolerance

Check

tolerance *NW : + 0.75

Start of delivery mark

*NW after s.o.d. : -0.15

Tolerance : +- 0.50

Check

tolerance *NW : +- 0.75

Barrel no. : 1

Beginning of delivery differende

betw. rack trav.

: 21.00

and maximum rack

travel : 11.00

Difference ° CS : 2.25

CRT ZERO POSITION	
Rack travel in mm Tolerance mm	: 11.60 : + 0.05
BASIC SETTING	
Rated speed rpm	: 600
Del. quantity cm3/1000 strokes	: 287.0
Tolerance cm3/1000 strokes	: +- 1.0
Check tolerance cm3/1000s.	: + 4.0
Spreed	The first and the second secon
Tolerance cm3/1000 strokes	: 5.0
Check tolerance cm3/1000s.	: 9.0
Rated speed rpm	: 275
Rack travel in mm Tolerance mm	: -7.00 : + 0.10
Del. quantity cm3/1000 strokes	: 37.0
Tolerance cm3/1000 strokes Check tolerance	: +- 2.0
cm3/1000s. Spreed	: +- 5.0
	: 8.0
Check tolerance cm3/1000s.	: 12.0
(B) SETTING OF IN. WITH GOVERNOR	JECTION PUMP
GUIDE SLEEVE TRAVE	EL
Rated speed rpm guide sleeve	: 1131
travel mm Tolerance mm	: 6.38 : +- 0.10

Rated speed rpm guide sleeve travel mm	: 275 : 0.80 : + 0.10	
Tolerance mm		
Rated speed rpm guide sleeve travel mm Tolerance mm	: 6.00 : + 0.10	
Rated speed rom	: 3%	
guide sleeve travel mm Tolerance mm	: 2.99 : +- 0.10	
Rated speed rpm guide sleeve	: 550	
travel mm Tolerance mm	: 6.00 : +- 0.10	
Rated speed rpm guide sleeve	: 1350	
travel mm Tolerance mm	: 11.50 : + 0.50	
GUIDE SLEEVE POSITION		
control lever position degree Rated speed rpm	: 109 : 600	
Rack travel in mm Tolerance mm	: 20.00 : + 0.80	
FULL LOAD DELIVERY AT FULL LOAD STOP		
Rated speed rpm Aneroid pressure	: 600	
hPa Del. quantity	: 1000	
cm3/1000 strokes	: 287.0	

cm3/1000 strokes : +- 1.0
Check tolerance
cm3/1000s. : +- 4.0
Spreed
Tolerance
cm3/1000 strokes : 5.0
Check tolerance

Check tolerance cm3/1000s. : 9.0

CONTROL LEVER

Tolerance

control lever position degree tolerance degree	: 274.0 : + 4.0
RATED SPEED rack travel mm Rated speed rpm Tolerance 1/min	: -1.00 : 1135 : +- 5
rack travel mm Rated speed rpm Tolerance 1/min	: −7.60 : 1240 : ← 15
rack travel mm Tolerance mm Rated speed rpm	: -11.10 : +- 0.50 : 1350
LOW IDLE	
control lever position degree tolerance degree	: 251.0 : +- 4.0
Setting point w/o	out bumper spring
Rated speed rpm	: 200
CRT mm min.	: < -5.80
Testing:	
Rated speed rpm rack travel mm Tolerance mm	
rack travel mm Rated speed rpm Tolerance 1/:min	: -9.50 : 365 : +- 20
TORQUE CONTROL Rated speed rpm	: 600
Rated speed rpm Tolerance mm	
ANEROID/ALTITUDE COMPENSATOR TEST	

Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : -3.65 : +- 0.30
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 560 : -1.25 : +- 0.15
Pressure hPa rack travel mm Tolerance mm	: 320 : -2.75 : +- 0.05
Start interlock	
Rated speed rpm Rated speed rpm	: > 100 : < 225
Check speed 1/min Check	: > 80
speed 1/min	: < 245
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity	: 1000 : 1050
cm3/1000 strokes Tolerance	: 280.0
cm3/1000 strokes Check tolerance	: +- 3.0
cm3/1000s.	: +- 6.0
Aneroid pressure	
hPa Rated speed rpm	: - : 500
Del. quantity cm3/1000 strokes	: 114.0
Tolerance cm3/1000 strokes Check tolerance	: +- 1.0
cm3/1000s.	: +- 4.0

STARTING FUEL DELIVERY

Rated speed rpm : 100

Del. quantity cm3/1000 strokes : 150.0 Tolerance cm3/1000 strokes : \leftarrow 15.0

Check tolerance

cm3/1000s. : + 19.0

LOW IDLE

Rated speed rpm : 275

Rack travel in mm : -7.00 : +- 0.10 Tolerance mm Del. quantity cm3/1000 strokes : 37.0

Tolerance

cm3/1000 strokes : \leftarrow 2.0

Check tolerance

cm3/1000s. Spreed

: +- 5.0

Tolerance

8.0 cm3/1000 strokes :

Check tolerance

cm3/1000s.: 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 23.07.97 Edition : ISO 4113 Test oil

Combination No. : 0 402 746 986

Injection pump

Pump designation: PES6P120A720RS7224

: -2

EP type number : 0 412 726 893

Governor

Governer design. : RQ275/1050PA1021-3

Governer no. : 0 421 801 677

Cust. part No. :

Customer-spec. information : IVECO-UNIC Customer : 8460.41.731 Motor

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5
Tolerance bar : +- 0.1

Overflow quantity

140 min. L/h Tolerance l/h : +- 20.0

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

208.5 bar Tolerance bar : + 1.5 Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter:

x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : - 1.0

Prestroke mm : +- 0.05 Tolerance mm

Check

: +- 0.10 tolerance mm

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

: 0-60-120-180-240 Phasing

: -300

: +- 0.50 Tolerance

Check

: +- 0.75 tolerance *NW

Start of delivery mark

Check

tolerance *NW : +- 0.40

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm : 12.65 Tolerance mm : + 0.05

Tolerance cm3/1000 strokes : 221.0 cm3/1000 strokes : 4.0 check tolerance cm3/1000s. : 4.0 cm3/1000s. : 4.0 cm3/1000s. : 5.0 cm3/100s. el. quantity	Tolerance	
Cm3/1000 strokes : + 1.0 Check talerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000s. : 9.0 Tolerance cm3/1000s. : 9.0 Tolerance cm3/1000s. : 9.0 Check tolerance cm3/1000s. : 9.0 Check tolerance cm3/1000s. : 9.0 Check tolerance cm3/1000s. : 9.0 Tolerance 1/min : + 8 Tolerance 1/min : + 15 Rated speed rpm : 275 Rack travel in mm : 5.00 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 23.0 Tolerance mm : + 0.50 Tolerance mm : + 0.50 Tolerance mm : + 0.50 Tolerance cm3/1000 strokes : 23.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000 strokes : + 0.0 Spreed Tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000s. : 12.0 Setting point w/out bumper spring CS: SETTING OF INJECTION PUMP WITH GOVERNOR CRT mm min. : > 6.50 Testing: Rated speed rpm : 275 rack travel mm : 2.00 Tolerance mm : + 0.10 Rated speed rpm : 100 Rated speed rpm : 275 rack travel mm : 2.00 Tolerance mm : + 0.10 Rated speed rpm : 275 rack travel mm : 2.00 Tolerance mm : + 0.10 Rated speed rpm : 5.00 Tolerance mm : + 0.10 Rated speed rpm : 20.00 Tolerance mm : + 0.10 Torque control Rated speed rpm : 1050 Rated speed rpm : 1050 Rated speed rpm : 1050 Rated speed rpm : 1050 Rated speed rpm : 1050 Rated speed rpm : 1050 Rated speed rpm : 1050 Torque control Rated speed rpm : 1050 Torque control Rated speed rpm : 1050 Torque control Rated speed rpm : 1050 Torque control Rated speed rpm : 1050 Torque control Rated speed rpm : 1050 Torque control Rated speed rpm : 1050 Torque control Rated speed rpm : 1050 Torque control Rated speed rpm : 1050 Torque control Rated speed rpm : 1050	cm3/1000 strokes : 221.0	
Check tolerance cm3/1000s. : ← 4.0 cm3/1000 strokes : 5.0 Spreed RATED SPEED cm3/1000s. : 9.0 Check tolerance cm3/1000s. : 9.0 RATED SPEED rack travel mm : 11.60 Rated speed rpm : 1103 Tolerance 1/min : ← 8 Check tolerance cm3/1000s. : 9.0 rack travel mm : 4.00 Rated speed rpm : 1175 Tolerance 1/min : ← 15 Raked speed rpm : 275 rack travel mm : 0.50 Tolerance 1/min : ← 15 Rack travel in mm : 5.00 Tolerance 1/min : ← 15 Tolerance mm : ← 0.10 Rated speed rpm : 1350 Del. quantity cm3/1000 strokes : 23.0 Tolerance mm : ← 0.50 Rated speed rpm : 1350 Check tolerance cm3/1000 strokes : ← 3.0 Check tolerance cm3/1000 strokes : ← 4.0 Cm3/1000 strokes : & - 4.0 Control lever position degree : 72.0 tolerance degree : ← 4.0 Cm3/1000s. : 12.0 Setting point w/out bumper spring (3) SETTING OF INJECTION PUMP WITH GOVERNOR Rated speed rpm : 100 Rated speed rpm : 275 rack travel mm : 5.00 Tolerance mm : ← 0.10 GUIDE SLEEVE POSITION Rated speed rpm : 355 Tolerance 1/min : ← 20 Rated speed rpm : 600 Rated speed rpm : 355 Tolerance 1/min : ← 20 Rack travel in mm : 20.00 Tolerance 1/min : ← 20 Tole		Spreed
Tolerance cm3/1000 strokes : 5.0		cm3/1000 strokes : 5.0 Check tolerance
Check tolerance cm3/1000s.	Spreed	cm3/1000s. : 9.0
Check tolerance cm3/1000S. : 9.0 Tolerance 1/min : ← 8 8 Rated speed rpm : 275 1175	•	rack travel mm : 11.60
Rated speed rpm : 275 Rack travel in mm : 5.00 Tolerance mm : +- 0.19 Del. quantity cm3/1000 strokes : 23.0 Tolerance cm3/1000s. : +- 6.0 Spreed Tolerance cm3/1000s. : +- 6.0 Spreed Tolerance cm3/1000s. : 12.0 Setting point w/out bumper spring (3) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION GUIDE SLEEVE POSITION GUIDE SLEEVE POSITION Rated speed rpm : 275 rack travel mm : 2.00 Rated speed rpm : 4.0 CRT mm min. : > 6.50 Testing: Rated speed rpm : 275 rack travel mm : 2.00 Rated speed rpm : 355 Tolerance mm : +- 0.10 ToRQUE CONTROL Rated speed rpm : 1050 rack travel mm : 2.00 Rated speed rpm : 355 Tolerance mm : +- 0.80 TORQUE CONTROL Rated speed rpm : 1050 rack travel mm : 12.65 Tolerance mm : +- 0.05		Tolerance 1/min : +- 8
Rated speed rpm : 275 Rack travel in mm : 5.00 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 23.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000 strokes : 8.0 Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 8.0 Tolerance cm3/1000 strokes : 12.0 Setting point w/out bumper spring CS SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION CRT mm min. : > 6.50 Testing: GUIDE SLEEVE POSITION Rated speed rpm : 275 rack travel mm : 2.00 Rated speed rpm : 355 Tolerance mm : + 0.10 Rated speed rpm : 355 Tolerance 1/min : + 20 TORQUE CONTROL Rated speed rpm : 1050	 ‡	Rated speed rpm : 1175
Rack travel in mm : 5.00	Rated speed rpm : 275	
cm3/1000 strokes : 23.0 23.0 Tolerance cm3/1000s trokes : + 3.0 100 IDLE Check tolerance cm3/1000s. : + 6.0 100 IDLE Spreed Tolerance cm3/1000 strokes : 8.0 12.0 Check tolerance cm3/1000s. : 12.0 12.0 Setting point w/out bumper spring 100 Setting point w/out bumper spring 100 CRT mm min. : > 6.50 100 Testing: 100 GUIDE SLEEVE POSITION 100 Rated speed rpm : 275 100 Control lever position degree : 109 109 Rated speed rpm : 600 100 Rated speed rpm : 20.00 100 Tolerance mm : + 0.80 1050 TORQUE CONTROL Rated speed rpm : 1050 1050 Rated speed rpm : 1050 1050 Aneroid pressure 1050	Tolerance mm : +- 0.10	Tolerance mm : +- 0.50
Check tolerance cm3/1000s. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 Check tolerance cm3/1000s. : 12.0 Setting point w/out bumper spring CRT mm min. : > 6.50 Testing: GUIDE SLEEVE POSITION GUIDE SLEEVE POSITION Rated speed rpm : 275 rack travel mm : 5.00 Tolerance mm : +- 0.10 Rated speed rpm : 355 Rack travel in mm : 20.00 Tolerance mm : +- 0.80 TORQUE CONTROL Rated speed rpm : 1050 Rated speed rpm : 1050 TORQUE CONTROL Rated speed rpm : 1050 Rated speed rpm : 1050 Aneroid pressure	cm3/1000 strokes : 23.0 + Tolerance +	
Spreed Tolerance cm3/1000 strokes: 8.0 control lever position degree: 72.0 tolerance degree: + 4.0 cm3/1000s. : 12.0 Setting point w/out bumper spring /**G` SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION GUIDE SLEEVE POSITION CONTROL Lever position degree: 109 Rated speed rpm: 5.00 Tolerance mm: + 0.10 position degree: 109 Rated speed rpm: 355 Tolerance mm: + 0.80 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm: 1050 Rated speed rpm: 1050 rack travel mm: 12.65 Tolerance mm: + 0.05	Check tolerance +	LOW IDLE
cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 Setting point w/out bumper spring As Setting point w/out bumper spring Rated speed rpm : 100 CRT mm min. : > 6.50 Testing: GUIDE SLEEVE POSITION Control lever position degree : 109 Rated speed rpm : 5.00 Tolerance mm : + 0.10 Rated speed rpm : 2.00 Rated speed rpm : 355 Tolerance mm : + 0.80 TORQUE CONTROL Rated speed rpm : 1050 Rated speed rpm : 1050 Rated speed rpm : 1050 Rated speed rpm : 1050 Rated speed rpm : 1050 Rated speed rpm : 1050 Rated speed rpm : 1050 Rated speed rpm : 1050 Tolerance mm : + 0.05	Spreed	
Setting point w/out bumper spring (3) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION CRT mm min. : > 6.50 Testing: Rated speed rpm : 275 rack travel mm : 5.00 Tolerance mm : + 0.10 Rated speed rpm : 355 Tolerance 1/min : + 20 TORQUE CONTROL Rated speed rpm : 1050 Rated speed rpm : 1050 Rated speed rpm : 1050 Rated speed rpm : 1050 Rated speed rpm : 1050 Rated speed rpm : 1050 Aneroid pressure	cm3/1000 strokes : 8.0	position degree : 72.0
WITH GOVERNOR CRT mm min. : > 6.50 Testing: GUIDE SLEEVE POSITION Rated speed rpm : 275 rack travel mm : 5.00 Tolerance mm : + 0.10 Rated speed rpm : 2.00 Rated speed rpm : 355 Rack travel in mm : 20.00 Tolerance mm : + 0.80 TORQUE CONTROL Rated speed rpm : 1050 Rated speed rpm : 1050 Rated speed rpm : 1050 Rated speed rpm : 1050 Rated speed rpm : 1050 Aneroid pressure		•
GUIDE SLEEVE POSITION Rated speed rpm : 275 rack travel mm : 5.00 Tolerance mm : + 0.10 Rated speed rpm : 20.00 Rated speed rpm : 20.00 Rack travel in mm : 20.00 Tolerance mm : + 0.80 TORQUE CONTROL Rated speed rpm : 1050 Rated speed rpm : 1050 Rated speed rpm : 1050 Rated speed rpm : 1050 Rated speed rpm : 1050 Rated speed rpm : 1050 Rated speed rpm : 1050 Rated speed rpm : 1050 Tolerance mm : + 0.05		Rated speed rpm : 100
GUIDE SLEEVE POSITION Rated speed rpm : 275 rack travel mm : 5.00 Tolerance mm : + 0.10 Rated speed rpm : 600 Rack travel in mm : 20.00 Tolerance mm : + 0.80 TORQUE CONTROL Rated speed rpm : 1050 Rated speed rpm : 1050 Rated speed rpm : 1050 Rated speed rpm : 1050 Rated speed rpm : 1050 Rated speed rpm : 1050 Rated speed rpm : 1050 Rated speed rpm : 1050 Tolerance mm : + 0.05	WITH GOVERNOR	CRT mm min. : > 6.50
Rated speed rpm : 275 rack travel mm : 5.00 Tolerance mm : + 0.10 Rated speed rpm : 600 Rated speed rpm : 600 Rated speed rpm : 2.00 Rated speed rpm : 355 Tolerance 1/min : + 20 TORQUE CONTROL Rated speed rpm : 1050 Rated speed rpm : 1050 Rated speed rpm : 1050 Rated speed rpm : 1050 Aneroid pressure	GUIDE SLEEVE POSITION	Testing:
position degree : 109 Rated speed rpm : 600	 	rack travel mm : 5.00
Rack travel in mm: 20.00 Tolerance mm: + 0.80 TORQUE CONTROL Rated speed rpm: 1050 Rated speed rpm: 1050 Aneroid pressure Rated speed rpm: 1050 Tolerance 1/min: + 20 TORQUE CONTROL Rated speed rpm: 1050 Tolerance mm: 12.65 Tolerance mm: + 0.05	position degree : 109 +	
Tolerance mm : + 0.80 TORQUE CONTROL Rated speed rpm : 1050 Rated speed rpm : 1050 Aneroid pressure TORQUE CONTROL Rated speed rpm : 1050 Tolerance mm : 12.65 Tolerance mm : + 0.05	Rated speed rpm : 600	
FULL LOAD DELIVERY AT FULL LOAD STOP + Rated speed rpm : 1050 + rack travel mm : 12.65 Rated speed rpm : 1050 + Tolerance mm : + 0.05 Aneroid pressure		Tolerance 1/min : +- 20
Rated speed rpm : 1050 + rack travel mm : 12.65 Aneroid pressure + rack travel mm : 12.65 Tolerance mm : + 0.05	FILL LOAD DELTVEDY AT FILL LOAD STOP	
Aneroid pressure	+	rack travel mm : 12.65
hPa : 1200 + Rated speed rpm : 600 Del. quantity + rack travel mm : 12.70 cm3/1000 strokes : 221.0 + Tolerance mm : + 0.10	Aneroid pressure +	
cm3/1000 strokes : 221.0 + Tolerance mm : +- 0.10	hPa : 1200 + Del. quantity +	Rated speed rpm : 600 rack travel mm : 12.70
+	cm3/1000 strokes : 221.0 +	Tolerance mm : +- 0.10

ANEROID/ALTI	TUDE
COMPENSATOR	TEST

SETTING

500 Rated speed rpm Pressure hPa 1200 rack travel mm 12.65 : +- 0.05 Tolerance mm

500 Rated speed rpm : Pressure hPa 7.70 rack travel mm Tolerance mm : +- 0.20

MEASUREMENT

Rated speed rpm 500

290 Pressure hPa 8.90 rack travel mm Tolerance mm : +- 0.20

Pressure hPa 580 11.35 rack travel mm Tolerance mm : +- 0.05

Start interlock

: > 100 Rated speed rpm : < 215 Rated speed rpm

Check

speed 1/min

speed 1/min : > 80 Check 235

: <

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa 1200 600 Rated speed rpm

Del. quantity

261.0 cm3/1000 strokes :

Tolerance

cm3/1000 strokes : +- 4.0

Check tolerance

7.0 cm3/1000s.

Aneroid pressure

hPa 600 Rated speed rpm :

Del. quantity

cm3/1000 strokes : 130.0

Tolerance

cm3/1000 strokes : +-

Check tolerance

cm3/1000s. 4.0

STARTING FUEL DELIVERY

Rated speed rpm 100

Det. quantity

cm3/1000 strokes : 135.0

Tolerance

cm3/1000 strokes : +- 15.0

Check tolerance

cm3/1000s. : +- 19.0

LOW IDLE

Rated speed rpm :

Rack travel in mm : 5.00 Tolerance mm : + 0.10 Del. quantity

cm3/1000 strokes : 23.0

Tolerance

cm3/1000 strokes : +-3.0 Check tolerance

6.0

cm3/1000s. Spreed

Tolerance 8.0 cm3/1000 strokes :

Check tolerance

cm3/1000s. 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 23.07.97 Test oil : ISO 4113

Combination No. : 0 402 796 820

Injection pump

Pump designation : PES6P120A720LS7410

EP type number : 0 412 726 957

Governor

Governer design. : RE30

Governer no. : 0 421 890 038

Cust. part No. : 0260744902

Customer—spec. information Customer : MTU

Motor : 6-R-183 Power KW : 441.0

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C : 40 Tolerance °C : +- 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter : 3.0
x length mm : 1000

REMARKS

Pump-specific values in Section (B) must be observed!

(A) INJECTION PUMP SETTINGS No basic setting.

Setting of constant delivery

under Section C.

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 4.05 Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 20.00 Tolerance mm : +- 1.00

Firing order : 6-2-4-1-5-

: 3

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance $^{\circ}NW$: +- 0.75

Start of delivery mark

Barrel no. : 6

(B) POSITIONER TESTING
Warm-up time: 3 minutes at
n=600 min-1, Uact = 2.5 V

TESTING & SETTING RACK TRAVEL SENSOR

POSITION

Engine speed min-1: 0

Setting point (P, R and H pump) 13.00 Uact V 3.100 CRT mm : +/- 0.05 Tolerance mm Check : +/- 0.10 tolerance mm Check value (P, R and H pump) 1.700 Uact V : CRT mm 6.15 Tolerance mm : +/- 0.25 Check tolerance mm : +/- 0.30 Setting point (M pump) : 5... 12.50 3.100 Uact V CRT mm : +/- 0.05 Tolerance mm Check : +/- 0.10 tolerance mm Check value (amua M) 1.700 Uact V CRT mm 5.50 Tolerance mm : +/- 0.25 Check : +/- 0.30 tolerance mm Stop position : Value with Uact V deenergised adjusting magnet and control rod in stop position. 0.75 CRT mm : +/- 0.25 Tolerance mm Check tolerance mm : +/- 0.35 ENGINE-SPEED SENSOR (All P and R pumps not H and M pumps) Test with control rod in stop position

Engine speed min-1: 600 Difference Amplitude to Amplitude V : max.1.4 (C) INJECTION PUMP WITH POSITIONER TEST POINT V1 Rated speed rpm : 1150 Uact V 3.500 Del. quantity cm3/1000 strokes : 362.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. FUEL DELIVERY CHARACTERISTICS 750 Rated speed rpm Uact V 3.500 Del. quantity cm3/1000 strokes : 423.0 Tolerance cm3/1000 strokes : +- 4.0Check tolerance cm3/1000s.: + 6.0 TEST POINT L1 Rated speed rpm : 350 1.340 Uact V Tolerance Volt : +- 0.060 Del. quantity cm3/1000 strokes : 25.0 Tolerance cm3/1000 strokes : +- 3.0Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. 12.0 End of test specification sheet

Tolerance V : ± -0.6

: +/- 1.20

Check

tolerance V

Engine speed min-1:
Amplitude V :

1.4

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 17.07.97

Test oil

: ISO 4113

Combination No. : 0 402 846 081

Injection pump

Pump designation: PE6P12OA32ORS8O44

EP type number

: 0 412 826 036

Governor

Governer design. : RQV300...950PA1355K

Governer no.

: 0 421 815 962

Cust. part No.

: 11127026

: -P03 v.04.97

Customer-spec. information

: VCE Customer

Motor

: TD122KLE

Power KW

: 250.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. 'C

Tolerance °C

: +- 2.0

Overflow valve : 2 417 413 078

Inlet press. bar :

2.5

Inlet press. bar : 2.5 Tolerance bar : +- 0.1

Overflow quantity

min. L/h

: 150

Tolerance l/h: + 20.0

Test nozzle holde

assembly

: 1 688 901 103

Opening pressure

bar

208.5

Tolerance bar

: +- 1.5

D22

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter :

2.0

x length mm

: 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Tolerance mm

: +- 0.05

Check

tolerance mm : **←** 0.10

Rack travel in mm : 11.00

: +- 0.50 Tolerance mm

Firing order

: 1-5-3-6-2-

: 4

Phasing

: 0-60-120-180-240

: -300

Tolerance

: +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

Tolerance : \leftarrow 0.50

Check

tolerance *NW

: +- 0.75

Barrel no.

: 1

BASIC SETTING

Rated speed rpm :

950

Rack travel in mm : 12.80

Tolerance mm : +- 0.05	<pre>+ guide sleeve + travel mm : 4.00</pre>
Del. quantity cm3/1000 strokes : 260.0	+ Tolerance mm : +- 0.25
	+ Rated speed rpm : 1280
Tolerance cm3/1000 strokes : + 1.0	guide sleeve travel mm : 13.50 Tolerance mm : +- 0.50
Check tolerance cm3/1000s. : + 4.0	Toterance iiiii . += 0.50
Spreed	GUIDE SLEEVE POSITION
Talannaa	t control loven
Tolerance cm3/1000 strokes : 8.0	<pre>control lever position degree : - 1 Rated speed rpm : 1130</pre>
Check tolerance	+
cm3/1000s. : 11.0	Rack travel in mm: 11.62
	Tolerance mm : + 1.30
Rated speed rpm : 300	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm : 7.00	+ Rated speed rpm : 950
Tolerance mm : + 0.10	+ Aneroid pressure
Del. quantity	+ hPa : 1500
cm3/1000 strokes : 80.0 Tolerance	+ Del. quantity + cm3/1000 strokes : 260.0
cm3/1000 strokes : +- 3.0	+ Tolerance
Check tolerance	+ cm3/1000 strokes : +- 1.0
cm3/1000s. : + 6.0 Spreed	+ Check tolerance + cm3/1000s. : +- 4.0
Tolerance	+ Spreed
cm3/1000 strokes : 5.0	+ Tolerance
Check tolerance	+ cm3/1000 strokes : 8.0
cm3/1000s. : 8.0	+ Check tolerance + cm3/1000s. : 11.0
	+
(B) SETTING OF INJECTION PUMP	+
WITH GOVERNOR	CONTROL LEVER
	+
GUIDE SLEEVE TRAVEL	control lever
Rated speed rpm : 1037	+ position degree : 64.0 + tolerance degree : + 4.0
guide sleeve	+
travel mm : 9.86	+ control lever
Tolerance mm : + 0.15	+ position degree : 118.0 + tolerance degree : +- 4.0
Rated speed rpm : 300	+ total allegines 1. 4.0
guide sleeve	+ RATED SPEED
travel mm : 1.61 Tolerance mm : +- 0.20	rack travel mm : 11.80
TOTAL CHANGE THE COLUMN	+ Rated speed rpm : 1015 + Tolerance 1/min : +- 5
Rated speed rpm : 773	+
guide sleeve	rack travel mm : 4.00
travel mm : 6.81 Tolerance mm : + 0.25	+ Rated speed rpm : 1110 + Tolerance 1/min : +- 15
TOCCI AI IGO TIRII	+
Rated speed rpm : 500	+ rack travel mm : 0.50

Tolerance mm Rated speed rpm	: +- 0.50 : 1210	+ Rat
		rac Tol
LOW IDLE		MEA
control lever position degree tolerance degree	: 71.0 : + 4.0	+ Rat + Pre + rac + Tol
control lever position degree tolerance degree	: 17.0 : +- 4.0	Pre rac
Setting point w/o	ut bumper spring	‡
Rated speed rpm CRT mm min.	: 200 : > 9.00	+ FUE
Testing:		+ Ane
Rated speed rpm rack travel mm Tolerance mm	: 300 : 7.00 : + 0.10	+ Rat + Del + cm3
Rated speed rpm	: 400	† Tol + cm3 + Che
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 950 : 12.80 : +- 0.05	+ cm3
Rated speed rpm rack travel mm Tolerance mm	: 800 : 13.40 : + 0.10	+ Rat - Del - cm - Tol
Rated speed rpm rack travel mm Tolerance mm	: 850 : 13.10 : + 0.10	+ cm3 + Che + cm3
Rated speed rpm rack travel mm Tolerance mm	: 500 : 12.20 : +- 0.20	T — STA
ANEROID/ALTITUDE COMPENSATOR TEST		+ rac + Tol + Del + cm3
SETTING		+ Tol + cm3 + Che
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 800 : 1500 : 13.40 : ← 0.10	+ cm3

Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 800 : - : 10.40 : + 0.20
MEASUREMENT	
Rated speed rpm	: 800
Pressure hPa rack travel mm Tolerance mm	: 700 : 2.60 : +- 0.20
Pressure hPa rack travel mm Tolerance mm	: 260 : 0.25 : + 0.05
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes	: - 300.0 : + 4.0 : + 8.0 : - 500 : 220.0
Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	
STARTING FUEL DEL	IVERY
Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	

LOW IDLE

Rated speed rpm	:	300	
Rack travel in mm Tolerance mm Del. quantity	: : +-		
cm3/1000 strokes	:	80.0	
cm3/1000 strokes Check tolerance	: +-	- 3.0	
cm3/1000s.	: +-	- 6.0	
Spreed Tolerance cm3/1000 strokes	:	5.0	
Check tolerance cm3/1000s.	:	8.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 23.07.97 : ISO 4113

Combination No. : 0 402 946 013

Injection pump

Pump designation : PES6P120A320RS8028 EP type number : 0 412 926 021

Governor

Governer design. : RQV275...1250PA1189K

Governer no. : 0 421 815 974

Cust. part No. : CCEP 5146A 66-220

Customer-spec. information

Customer : RENAULT V.I.

: MIDR 06.02.26Y41 Motor Power KW : 184.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C

temp. °t Tol∉rance °C : +- 2.0

Overflow valve : 2 417 413 078

Inlet press. bar : 2.5

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

: 208.5 bar Tolerance bar : +- 1.5

Test Lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0

Tolerance bar : +- 1.0

Prestroke mm : 5.00 Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm: 11.00

Tolerance mm : +- 0.50

Firing order : 1-5-3-6-2-

: 4

: 0-60-120-180-240 Phasing

: -300

: + 0.50 Tolerance

Check

: +- 0.75 tolerance "NW

Start of delivery mark

*NW after s.o.d. : -0.25

: +- 0.50 Tolerance

Check

tolerance °NW : +- 0.75

Barrel no. : 1

Beginning of delivery differende

betw. rack trav.

: 21.00 mm

and maximum rack

11.00 travel

Difference * CS : 2.25

		+ Rated speed rpm : 275
		+ guide sleeve
CRT ZERO POSITION		+ travel mm : 1.10
		Tolerance mm : +- 0.25
Rack travel in mm	. 14 40	+ Rated speed rpm : 912
Tolerance mm		+ guide sleeve
INCEL OF ICC HINE		travel mm : 6.79
		+ Tolerance mm : +- 0.25
BASIC SETTING		Total arice min
		+ Rated speed rpm : 412
Rated speed rpm	: 1250	+ guide sleeve
		+ travel mm : 2.53
Del. quantity		+ Tolerance mm : +- 0.25
cm3/1000 strokes	: 276.0	+
		Rated speed rpm : 462
Tolerance		+ guide sleeve
cm3/1000 strokes	: - 1.0	+ travel mm : 3.16
		+ Tolerance mm : +- 0.25
Check tolerance		+
cm3/1000S.	: 4.0	+ Rated speed rpm : 550
		guide sleeve
Spreed	-	+ travel mm : 3.97
		† Tolerance mm : +- 0.25
Tolerance		+
cm3/1000 strokes	: 5.0	Rated speed rpm : 1630
		+ guide sleeve
Check tolerance		+ travel mm : 13.50
cm3/1000S.	: 9.0	+ Tolerance mm : + 0.50
		+
		+
		→ GUIDE SLEEVE POSITION
Rated speed rpm	: 275	+
		†
Rack travel in mm		+ control lever
Tolerance mm	: +- 0.10	+ position degree : - 1
Del. quantity		+ Rated speed rpm : 1420
cm3/1000 strokes	: 47.0	†
Tolerance		+ Rack travel in mm : 13.50
cm3/1000 strokes	: +- 2.0	† Tolerance mm : → 1.50
Check tolerance	. =	+
cm3/1000s.	: +- 6.0	+
Spreed		+ FULL LOAD DELIVERY AT FULL LOAD
Tolerance		†
cm3/1000 strokes	: 8.0	+ Rated speed rpm : 1250
Check tolerance		+ Aneroid pressure
-	: 12.0	+ hPa : 1600
= -	: 12.0	+ Del. quantity
cm3/1000s.		Del. quantity + cm3/1000 strokes : 276.0
cm3/1000s.		Del. quantity + cm3/1000 strokes : 276.0 + Tolerance
cm3/1000s. (B) SETTING OF IN		Del. quantity cm3/1000 strokes : 276.0 Tolerance cm3/1000 strokes : + 1.0
cm3/1000s. (B) SETTING OF IN		Del. quantity + cm3/1000 strokes : 276.0 + Tolerance
cm3/1000s. (B) SETTING OF IN		Del. quantity cm3/1000 strokes : 276.0 Tolerance cm3/1000 strokes : + 1.0
cm3/1000s. (B) SETTING OF IN WITH GOVERNOR	JECTION PUMP	Del. quantity cm3/1000 strokes : 276.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance
cm3/1000s. (B) SETTING OF IN WITH GOVERNOR	JECTION PUMP	Del. quantity cm3/1000 strokes : 276.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0
cm3/1000s. (B) SETTING OF INWITH GOVERNOR GUIDE SLEEVE TRAV	JECTION PUMP	Del. quantity cm3/1000 strokes : 276.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed
cm3/1000s. (B) SETTING OF IN WITH GOVERNOR GUIDE SLEEVE TRAV Rated speed rpm	JECTION PUMP	Del. quantity cm3/1000 strokes : 276.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0
cm3/1000s. (B) SETTING OF IN WITH GOVERNOR GUIDE SLEEVE TRAV Rated speed rpm guide sleeve	JECTION PUMP FEL : 1332	Del. quantity cm3/1000 strokes : 276.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance
cm3/1000s.	JECTION PUMP	Del. quantity cm3/1000 strokes : 276.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0

		† SETTING	
CONTROL LEVER		Rated speed rpm : 1250 Pressure hPa : 1600 Tolerance mm : +- 0.	
position degree tolerance degree		Rated speed rpm : 1000 Pressure hPa : -	
RATED SPEED rack travel mm Rated speed rpm	: -1.00 : 1325	rack travel mm : -4.	
Tolerance 1/min	: +- 15	+ MEASUREMENT +	
rack travel mm Rated speed rpm	: 1480	Rated speed rpm : 1250	
Toterance 1/min	: -13.90	+ Pressure hPa : 240 + rack travel mm : -3. + Tolerance mm : + 0.	60
Tolerance mm Rated speed rpm	: +- 0.50 : 1600	Pressure hPa : 480 rack travel mm : -1. Tolerance mm : +- 0.	60
LOW IDLE		Start interlock	
control lever position degree		+ Rated speed rpm : < 2	75 40
tolerance degree Testing:	: +- 4.0	+ Check	55
Rated speed rom rack travel mm Tolerance mm	: 275 : -7.40 : +- 0.10	<pre>fuel Delivery Characterist</pre>	60
Rated speed rpm	: 200		
CRT mm max.	: < -6.60	+ Aneroid pressure - hPa : 1600 + Rated speed rpm : 800	
Rated speed rpm	: 380	Del. quantity cm3/1000 strokes : 287 Tolerance	.0
TORQUE CONTROL Rated speed rpm	: 1250	- cm3/1000 strokes : +- 3 - Check tolerance	.0
Rated speed rpm rack travel mm	: 800 : -0.75		.0
Tolerance mm		+ Aneroid pressure + hPa : - Rated speed rpm : 1000	
rack travel mm Tolerance mm	: -4.10 : +- 0.25	+ Del. quantity + cm3/1000 strokes : 181 + Tolerance	
ANEROID/ALTITUDE COMPENSATOR TEST		+ Check tolerance	.0

STARTING FUEL DELIVERY

Rated speed rpm : 100 Del. quantity

cm3/1000 strokes : 95.0

Tolerance

cm3/1000 strokes : + 15.0

Check tolerance

cm3/1000s. : +- 19.0

LOW IDLE

Rated speed rpm : 275

Rack travel in mm : -7.40Tolerance mm : + 0.10

Del. quantity

cm3/1000 strokes : 47.0

Tolerance

cm3/1000 strokes : + 2.0

Check tolerance

cm3/1000s. : + 6.0

Spreed Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 24.03.97 Test oil : ISO 4113

Combination No. : 0 402 996 002

Injection pump

Pump designation : PE6P120A720LS8032 EP type number : 0 412 926 023

Governor

Governer design. : RE30

: 0 421 890 025 Governer no.

: 1364497 Cust. part No.

Customer-spec. information : SCANIA Customer : DSC1201 Motor

TEST BENCH REQUIREMENTS

Inlet line : EHAB

Test oil inlet

temp. °C Tolerance °C : +- 2.0

Overflow valve : 2 417 413 082

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 104 assembly

Opening pressure

251.5 : +- 1.5 Tolerance bar

Test Lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0

: 600 x length mm

REMARKS

Pump-specific values in Section (B) must be observed!

(A) INJECTION PUMP SETTINGS

No basic setting.

Setting of constant delivery

under Section C.

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : + 1.0

Prestroke mm 3.85 Tolerance mm : +- 0.05

Check

: +- 0.10 tolerance mm

Rack travel in mm : 10.50 Tolerance mm : + 1.50

: 1-5-3-6-2-Firing order

Phasing : 0-60-120-180-240

: -300

: +- 0.50 Tolerance

Check

tolerance *NW : +- 0.75

Start of delivery blocking

*NW after s.o.d. : 180.00 Tolerance : + 0.50

Check

: +- 0.75 tolerance °NW

Barrel no. : 1

(B) POSITIONER TESTING Warm-up time: 3 minutes at n=600 min-1, Uact = 2.5 VTESTING & SETTING RACK TRAVEL SENSOR POSITION Engine speed min-1: Setting point (P, R and H pump) 3.100 Uact V CRT mm 13.00 Tolerance mm : +/- 0.05 Check tolerance mm : +/- 0.10 Check value (P, R and H pump) 1.700 Uact V CRT mm 6.15 : +/- 0.25 Tolerance mm Check tolerance mm : +/- 0.30 Setting point (M pump) 3.100 Uact V CRT mm 12.50 Tolerance mm : +/- 0.05Check : +/- 0.10 tolerance mm Check value (amua M) 1.700 Uact V 5.50 CRT mm : +/- 0.25 Tolerance mm Check : +/- 0.30 tolerance mm Stop position : Value with Uact V deenergised adjusting magnet and control rod in stop position. 0.75 CRT mm Tolerance mm : +/- 0.25 Check

: +/- 0.35

ENGINE-SPEED SENSOR (All P and R pumps not H and M pumps)

Test with control rod in stop position

Engine speed min-1: 60
Amplitude V : 1.4
Tolerance V : +/- 0.6
Check

tolerance V : +/- 1.20

Engine speed min-1: 600

Difference Amplitude to

Amplitude V : max.1.4

(C) INJECTION PUMP WITH POSITIONER

TEST POINT V1

Rated speed rpm : 700 Uact V : 3.400

Del. quantity

cm3/1000 strokes : 365.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : + 11.0

Spreed Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. : 12.0

FUEL DELIVERY CHARACTERISTICS

Rated speed rpm : 950 Uact V : 3.400 Del. quantity

cm3/1000 strokes : 322.0

Tolerance

cm3/1000 strokes : +- 4.0

Check tolerance

cm3/1000s. : + 10.0

TEST POINT L1

Rated speed rpm : 250
Uact V : 1.400
Tolerance Volt : +- 0.060
Check tolerance

Volt : + 0.060

Del. quantity

cm3/1000 strokes : 16.0

tolerance mm

Tolerance cm3/1000 strokes : +- 3.0 Spreed

Tolerance cm3/1000 strokes : 4.0

Check tolerance cm3/1000s. 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 18.07.97 Edition Test oil : ISO 4113

: 0 403 474 021 Combination No.

Injection pump

Pump designation : PES4MW100/720RS1181 : 0 413 404 107

EP type number

Governor

Governer design. : RSV400...1000MW1A348

Governer no. : 0 420 085 183

Cust. part No. : 9880882

Customer-spec. information Customer : LIEBHERR : D924T-E A2 Motor

Power KW : 120.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C 40 Tolerance °C 2.0

Overflow valve : 1 417 413 049

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

173.5 bar : **←** 1.5 Tolerance bar

: 1 680 750 008 Test lines

Outside diameter : 6.0

x inside diameter : x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant. per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm 3.05 : +- 0.05 Tolerance mm

Check

: +- 0.10 tolerance mm

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

: 1-3-4-2 Firing order

: 0-90-180-270 Phasing

Tolerance : +- 0.50

Check

tolerance *NW : +- 0.75

Start of delivery mark

Barrel no. 1

BASIC SETTING

Rated speed rpm : 900

Rack travel in mm : 13.20 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 176.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. 4.0

Spreed		+ Tolerance + cm3/1000 strokes	
Tolerance cm3/1000 strokes	: 4.0	theck tolerance cm3/1000s.	
Check tolerance cm3/1000s.	: 7.5	CONTROL LEVER	_
		+ CONTROL LEVER	
Rated speed rpm	: 550	control lever position degree tolerance degree	
Rack travel in mm		+	
olerance mm	: +- 0.20	+ RATED SPEED	
l. quantity 3/1000 strokes	: 25.0	+ rack travel mm + Rated speed rpm	
olerance	. 25.0	+ Tolerance 1/min	
n3/1000 strokes	: + 2.0	+	
eck tolerance 3/1000s.	: +- 4.5	rack travel mm Rated speed rpm	
oreed	· ·- 4.J	+ Tolerance 1/min	
olerance		+	
3/1000 strokes	: 3.5	+ rack travel mm	
eck tolerance 3/1000s.	: 5.0	Tolerance mm Rated speed rpm	
10000.	. 5.0	+ Nated Speed (piii	•
		rack travel mm	:
3) SETTING OF IN. ITH GOVERNOR	JECTION PUMP	+ Rated speed rpm + Tolerance 1/min	
JIDE SLEEVE POSIT	rion	_	_
		tow idle	
ontrol lever		Į	
osition degree	: - 3	control lever	
ted speed rpm	: 800	position degree	:
ck travel in mm	: 0.65	tolerance degree	:
lerance mm	: + 0.35	Setting point w/ou	jτ
overnor spring		Rated speed rpm	;
e-tension	7 75	+ rack travel mm	:
ick setting x	: 3.75	† Tolerance mm	:
II IOAN DELIVERY	AT FULL LOAD STOP	- Rated speed rpm	:
CE COND DECITE		+ CRT mm min.	:
ed speed rpm	: 900	† Testing:	
eroid pressure 'a	: 1250	T resting:	
el. quantity		Rated speed rpm	:
m3/1000 strokes	: 176.0	rack travel mm	:
olerance m3/1000 strokes	: + 1.0	† Tolerance mm	:
heck tolerance	. ,	Į	
n3/1000s.	: ← 4.0	TORQUE CONTROL	
oreed		+ Rated speed rpm	:
		🕂 🔭 rack travel mm	

Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 4.0 : 7.5
CONTROL LEVER	
control lever position degree tolerance degree	: 96.0 : + 4.0
RATED SPEED rack travel mm Rated speed rpm Tolerance 1/min	: 12.20 : 915 : +- 5
rack travel mm Rated speed rpm Tolerance 1/min	: 4.00 : 975 : + 10
rack travel mm Tolerance mm Rated speed rpm	: 1.00 : +- 0.70 : 1100
rack travel mm Rated speed rpm Tolerance 1/min	: 4.00 : 980 : +- 10
LOW IDLE	
LOW IDLE control lever position degree tolerance degree	: 78.0 : + 4.0
control lever position degree	: +- 4.0
control lever position degree tolerance degree	: +- 4.0 out bumper spring
control lever position degree tolerance degree Setting point w/o	: + 4.0 out bumper spring : 550 : 4.10 : + 0.10
control lever position degree tolerance degree Setting point w/o Rated speed rpm rack travel mm Tolerance mm	: + 4.0 out bumper spring : 550 : 4.10 : + 0.10
control lever position degree tolerance degree Setting point w/o Rated speed rpm rack travel mm Tolerance mm	: ← 4.0 out bumper spring : 550 : 4.10 : ← 0.10 : 100
control lever position degree tolerance degree Setting point w/o Rated speed rpm rack travel mm Tolerance mm Rated speed rpm CRT mm min.	: ← 4.0 out bumper spring : 550 : 4.10 : ← 0.10 : 100 : > 19.00

Tolerance mm	: +- 0.05	+ Aneroid pressure
		+ hPa : 1250
Rated speed rpm	: 500	Rated speed rpm : 600
rack travel mm	: 13.20	+ Del. quantity
Tolerance mm	: +- 0.10	- cm3/1000 strokes : 180.0
Datad assad ass	. 400	+ Tolerance + cm3/1000 strokes : +- 2.0
Rated speed rpm	. 000	+ Check tolerance
rack travel mm Tolerance mm	: + 0.10	- cm3/1000s. : + 5.0
TOTAL GLICE IMI	0.10	- Cili37 10000:
·		
ANEROID/ALTITUDE		Aneroid pressure
COMPENSATOR TEST		+ hPa : -
		+ Rated speed rpm : 550
		+ Del. quantity
SETTING		+ cm3/1000 strokes : 156.0
Dada al accest con	. 550	+ Tolerance
Rated speed rpm		+ cm3/1000 strokes : +- 1.0
Pressure hPa rack travel mm	: 12.20	+ Check tolerance + cm3/1000S. : +- 4.0
Tolerance mm		T CIII3/10003 +- 4.0
TOTEL BLICE IIII	0.05	$oldsymbol{\downarrow}$
Rated speed rpm	: 550	
Pressure hPa	: 1250	STARTING FUEL DELIVERY
rack travel mm Tolerance mm	: 1250 : 13.20	+
Tolerance mm	: +- 0.05	+ ESS test: With 24 V solenoid activated,
		+ rack must reach start position in max.
MEASUREMENT		+ control lever setting.
	550	†
Rated speed rpm	: 550	†
Pressure hPa	: 550	Rated speed rpm : 100
rack travel mm		+ rack travel mm : 20.00
Tolerance mm		+ Tolerance mm : +- 1.00
rocci di icc imir	0.05	+ Del. quantity
Pressure hPa	: 640	+ cm3/1000 strokes : 135.0
rack travel mm		+ Tolerance
Tolerance mm	: +- 0.10	+ cm3/1000 strokes : ← 5.0
		+ Check tolerance
		+ cm3/1000s. : +- 8.0
		
FUEL DELIVERY CHA	ARACTERISTICS	†
		İ
Aneroid pressure		T LOW IDLE
hPa	: 1250	+
Rated speed rpm		Rated speed rpm : 550
Del. quantity		
cm3/1000 strokes	: 178.0	Rack travel in mm: 4.50
Tolerance		+ Tolerance mm : +- 0.20
cm3/1000 strokes	: +- 2.0	+ Del. quantity
Check tolerance		† cm3/1000 strokes : 25.0
cm3/1000s.	: ← 5.0	† Tolerance
Spreed		+ cm3/1000 strokes : +- 2.0
Tolerance		+ Check tolerance + cm3/1000s. : +- 4.5
cm3/1000 strokes	: 6.0	+ cm3/1000S. : +- 4.5 + Spreed
Check tolerance cm3/1000s.	: 9.0	+ Tolerance
CIID/ 10003.	: 9.0	+ cm3/1000 strokes : 3.5
		I CHD/ 1000 3010863 . 3.3

Check tolerance cm3/1000s.	:	5.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 18.07.97 Test oil : ISO 4113

Combination No. : 0 403 474 021F

Injection pump

Pump designation : PES4MW100/720RS1181

EP type number : 0 413 404 107

Governor

Governer design. : RSV400...1000MW1A348

Governer no. : 0 420 085 183

Cust. part No.

Customer—spec. information
Customer : LIEBHERR
Motor : D924 T-E A2

Power KW : 120.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 417 413 049

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : +- 1.0

Prestroke mm : 3.05
Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50
Tolerance mm : + 1.50

Firing order : 1-3-4-2

Phasing : 0-90-180-270

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 900

Rack travel in mm: 13.20

Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes : 176.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : +- 4.0

Spreed +	Tolerance
1	cm3/1000 strokes : 4.0
Tolerance +	Check tolerance
cm3/1000 strokes : 4.0 +	cm3/1000s. : 7.5
+	
Check tolerance	
cm3/1000s. : 7.5	
	CONTROL LEVER
+	
+	control lever
Rated speed rpm : 400 +	position degree : 96.0
t	
Rack travel in mm: 4.50	RATED SPEED
Tolerance mm : +- 0.20	rack travel mm : 12.20
Del. quantity + cm3/1000 strokes : 25.0 +	Rated speed rpm : 915 Tolerance 1/min : +- 5
cm3/1000 strokes : 25.0 +	Tolerance 1/min : +- 5
cm3/1000 strokes : +- 2.0 +-	rack travel mm : 4.00
Check tolerance	Rated speed rpm : 975
cm3/1000s. : +- 4.5	Tolerance 1/min : +- 10
Spreed	
Tolerance	rack travel mm : 1.00
cm3/1000 strokes : 3.5	Tolerance mm : + 0.70
Check tolerance +	Rated speed rpm : 1075
cm3/1000s. : 5.0 +	
+	rack travel mm : 4.00
+	Rated speed rpm : 980
(B) SETTING OF INJECTION PUMP	Tolerance 1/min : +- 10
WITH GOVERNOR +	
†	
‡	
CUIDE SI EEVE DOSITION	LOW TOLE
GUIDE SLEEVE POSITION	LOW IDLE
GUIDE SLEEVE POSITION	LOW IDLE
}	
control lever	control lever
control lever position degree : -3	
control lever	control lever position degree : 78.0
control lever position degree : -3 Rated speed rpm : 800	control lever
control lever position degree : -3	control lever position degree : 78.0 Setting point w/out bumper spring Rated speed rpm : 550
control lever position degree : -3 Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35	control lever position degree : 78.0 Setting point w/out bumper spring Rated speed rpm : 550
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring	control lever position degree : 78.0 Setting point w/out bumper spring
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring pre-tension	control lever position degree : 78.0 Setting point w/out bumper spring Rated speed rpm : 550 rack travel mm : 4.10 Tolerance mm : + 0.10
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring	control lever position degree : 78.0 Setting point w/out bumper spring Rated speed rpm : 550
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring pre-tension	control lever position degree : 78.0 Setting point w/out bumper spring Rated speed rpm : 550 rack travel mm : 4.10 Tolerance mm : + 0.10 Rated speed rpm : 100
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring pre-tension click setting x : 3.75	control lever position degree : 78.0 Setting point w/out bumper spring Rated speed rpm : 550 rack travel mm : 4.10 Tolerance mm : + 0.10
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring pre-tension	control lever position degree : 78.0 Setting point w/out bumper spring Rated speed rpm : 550 rack travel mm : 4.10 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.00
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring pre-tension click setting x : 3.75 FULL LOAD DELIVERY AT FULL LOAD STOP	control lever position degree : 78.0 Setting point w/out bumper spring Rated speed rpm : 550 rack travel mm : 4.10 Tolerance mm : + 0.10 Rated speed rpm : 100
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : +- 0.35 governor spring pre-tension click setting x : 3.75 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 900	control lever position degree : 78.0 Setting point w/out bumper spring Rated speed rpm : 550 rack travel mm : 4.10 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.00 Testing:
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring pre-tension click setting x : 3.75 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 900 Aneroid pressure	control lever position degree : 78.0 Setting point w/out bumper spring Rated speed rpm : 550 rack travel mm : 4.10 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.00 Testing: Rated speed rpm : 550
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring pre-tension click setting x : 3.75 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 900 Aneroid pressure hPa : 1250	control lever position degree : 78.0 Setting point w/out bumper spring Rated speed rpm : 550 rack travel mm : 4.10 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.00 Testing: Rated speed rpm : 550 rack travel mm : 4.50
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring pre-tension click setting x : 3.75 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 900 Aneroid pressure hPa : 1250 Del. quantity	control lever position degree : 78.0 Setting point w/out bumper spring Rated speed rpm : 550 rack travel mm : 4.10 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.00 Testing: Rated speed rpm : 550
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring pre-tension click setting x : 3.75 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 900 Aneroid pressure hPa : 1250 Del. quantity cm3/1000 strokes : 176.0	control lever position degree : 78.0 Setting point w/out bumper spring Rated speed rpm : 550 rack travel mm : 4.10 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.00 Testing: Rated speed rpm : 550 rack travel mm : 4.50
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring pre-tension click setting x : 3.75 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 900 Aneroid pressure hPa : 1250 Del. quantity cm3/1000 strokes : 176.0 Tolerance	control lever position degree : 78.0 Setting point w/out bumper spring Rated speed rpm : 550 rack travel mm : 4.10 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.00 Testing: Rated speed rpm : 550 rack travel mm : 4.50 Tolerance mm : + 0.20
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring pre-tension click setting x : 3.75 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 900 Aneroid pressure hPa : 1250 Del. quantity cm3/1000 strokes : 176.0	control lever position degree : 78.0 Setting point w/out bumper spring Rated speed rpm : 550 rack travel mm : 4.10 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.00 Testing: Rated speed rpm : 550 rack travel mm : 4.50
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring pre-tension click setting x : 3.75 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 900 Aneroid pressure hPa : 1250 Del. quantity cm3/1000 strokes : 176.0 Tolerance cm3/1000 strokes : + 1.0	control lever position degree : 78.0 Setting point w/out bumper spring Rated speed rpm : 550 rack travel mm : 4.10 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.00 Testing: Rated speed rpm : 550 rack travel mm : 4.50 Tolerance mm : + 0.20 TORQUE CONTROL Rated speed rpm : 900 rack travel mm : 900 rack travel mm : 13.20
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35 governor spring pre-tension click setting x : 3.75 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 900 Aneroid pressure hPa : 1250 Del. quantity cm3/1000 strokes : 176.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance	control lever position degree : 78.0 Setting point w/out bumper spring Rated speed rpm : 550 rack travel mm : 4.10 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.00 Testing: Rated speed rpm : 550 rack travel mm : 4.50 Tolerance mm : + 0.20 TORQUE CONTROL Rated speed rpm : 900

Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm	: +- 0.05 : 600 : 13.20	Rated space of the constraint	anti D si ce D si oler
ANEROID/ALTITUDE COMPENSATOR TEST		+ Aneroid + hPa + Rated sp Del. qua	oeed
SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 550 : - : 12.20 : + 0.05	cm3/1000 Tolerand cm3/1000 Check to cm3/1000	D st ce D st oler
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 550 : 1250 : 13.20 : +- 0.05	T STARTING ESS tes rack mu	st:
MEASUREMENT		control	L le
Rated speed rpm	: 550	1	
Pressure hPa rack travel mm Tolerance mm	: 550 : 12.45 : + 0.05	Rated sp rack tra Tolerand Del. qua	avel ce n
Pressure hPa rack travel mm Tolerance mm	: 640 : 13.05 : + 0.10	- cm3/1000 - Tolerand - cm3/1000 - Check to - cm3/1000) st ce) st oler
FUEL DELIVERY CHA	RACTERISTICS	-	
Aneroid pressure hPa Rated speed rpm	: 1250 : 500	LOW IDLE	
Del. quantity cm3/1000 strokes Tolerance		Rack tra	e m
cm3/1000 strokes Check tolerance cm3/1000s. Spreed	: +- 2.0 : +- 5.0	+ Del. qua + cm3/1000 + Tolerand - cm3/1000) st e
spreed Tolerance cm3/1000 strokes	: 6.0	+ Check to + cm3/1000 + Spreed	oler DS.
Check tolerance cm3/1000s.	: 9.0	+ Tolerand + cm3/1000	

	:	600		
Del. quantity cm3/1000 strokes	:	180.0		
Tolerance cm3/1000 strokes	: +-	2.0		
Check tolerance cm3/1000s.	: +-	5.0		
Aneroid pressure			_	
Rated speed rpm	:	550		
Del. quantity cm3/1000 strokes	:	156.0		
Tolerance cm3/1000 strokes	: +-	1.0		
Check tolerance cm3/1000s.	: +-	4.0		
ESS test: With 2 rack must reach control lever se	4 V s start	olenoid positi		
ESS test: With 2 rack must reach control lever se	4 V s start	olenoid positi 100 20.00		
ESS test: With 2 rack must reach control lever se Rated speed rpm rack travel mm Tolerance mm Del. quantity	4 V s start tting	olenoid positi 100 20.00		
ESS test: With 2 rack must reach control lever se Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance	4 V s start tting	olenoid positi 100 20.00 1.00		
ESS test: With 2 rack must reach control lever se Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	4 V s start tting	olenoid positi 100 20.00 1.00 135.0		
ESS test: With 2 rack must reach control lever se Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	4 V s start tting	olenoid positi 100 20.00 1.00		
ESS test: With 2 rack must reach control lever se Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	4 V s start tting	olenoid positi 100 20.00 1.00 135.0		
ESS test: With 2 rack must reach control lever se Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	4 V s start tting	olenoid positi 100 20.00 1.00 135.0		
ESS test: With 2 rack must reach control lever se Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. LOW IDLE Rated speed rpm Rack travel in mm Tolerance mm	4 V s start tting : :+- :+-	100 20.00 1.00 135.0 5.0		
ESS test: With 2 rack must reach control lever se Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. LOW IDLE Rated speed rpm Rack travel in mm	4 V s start tting : :+- :+-	100 20.00 1.00 135.0 5.0 8.0		

Rated speed rpm	:		400
Rack travel in mm Tolerance mm	:	+	4.50 0.20
Del. quantity cm3/1000 strokes	:		25.0
Tolerance cm3/1000 strokes	:	+-	2.0
Check tolerance cm3/1000s.	:	+-	4.5
Spreed Tolerance			
cm3/1000 strokes Check tolerance	:		3.5
cm3/1000s.	:		5.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 18.07.97 Test oil : ISO 4113

Combination No. : 0 403 476 112

Injection pump

Pump designation : PES6MW100/720RS1225

: -1

EP type number : 0 413 406 220

Governor

Governer design. : RSV400...1000MW1A338

: -1

Governer no. : 0 420 085 184

Cust. part No. : 9880791

Customer—spec. information Customer : LIEBHERR

Motor : D 926 T-E A2

Power KW : 164.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. *C : 40 Tolerance *C : + 2.0

Overflow valve : 1 417 413 049

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 3.05
Tolerance mm : + 0.05
Check

tolerance mm : + 0.10

Rack travel in mm : 10.51
Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance *NW : +- 0.75

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm : 14.05 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 159.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance cm3/1000s. : + 4.0 Spreed	+ Check tolerance - cm3/1000s. : +- 4.0 + Spreed - Tolerance - cm3/1000 strokes : 4.0
Tolerance cm3/1000 strokes : 4.0	Check tolerance cm3/1000s. : 7.5
Check tolerance cm3/1000s. : 7.5	CONTROL LEVER
Rated speed rpm : 400	control lever position degree : 98.0 tolerance degree : +- 4.0
Rack travel in mm: 5.80 Tolerance mm: + 0.10 Del. quantity cm3/1000 strokes: 17.0 Tolerance	RATED SPEED rack travel mm : 13.05 Rated speed rpm : 1040 Tolerance 1/min : +- 5
<pre>cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000S. : +- 4.5 Spreed Tolerance</pre>	rack travel mm : 4.00 Rated speed rpm : 1085 Tolerance 1/min : + 10
cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : 5.0	rack travel mm : 1.00 Tolerance mm : + 0.70 Rated speed rpm : 1200
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	rack travel mm : 4.00 Rated speed rpm : 1090 Tolerance 1/min : + 10
GUIDE SLEEVE POSITION	LOW IDLE
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.65	control lever position degree : 70.0 tolerance degree : + 4.0
Tolerance mm : +- 0.35	Setting point w/out bumper spring
governor spring pre-tension click setting x : 2.25	Rated speed rpm : 400 rack travel mm : 5.00 Tolerance mm : + 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 100
Rated speed rpm : 1000 Aneroid pressure hPa : 1200	+ CRT mm min. : > 19.00 - Testing:
Del. quantity cm3/1000 strokes : 159.0 Tolerance cm3/1000 strokes : +- 1.0	Rated speed rpm : 400 rack travel mm : 5.80 Tolerance mm : +- 0.10

		† Tolerance
TORQUE CONTROL	: 1000	+ Check tolerance + cm3/1000s. : 9.0
Rated speed rpm rack travel mm		1 (1115/10003. : 9.0
Tolerance mm	: + 0.05	
rotti di let ilan		Aneroid pressure
Rated speed rpm	: 500	+ hPa : 1200
rack travel mm	: 14.05	+ Rated speed rpm : 700
Tolerance mm	: ← 0.10	- Del. quantity
	700	+ cm3/1000 strokes : 160.5
Rated speed rpm		+ Tolerance
rack travel mm		+ cm3/1000 strokes : +- 2.0
Tolerance mm	: +- 0.10	+ Check tolerance + cm3/1000s. : +- 5.0
		I tilis/10003 3.0
ANEROID/ALTITUDE		· L
COMPENSATOR TEST		Aneroid pressure
		+ hPa : -
		+ Rated speed rpm : 550
SETTING		+ Del. quantity
		+ cm3/1000 strokes : 141.5
Rated speed rpm		+ Tolerance
Pressure hPa	13.45	+ cm3/1000 strokes : +- 1.0 + Check tolerance
rack travel mm Tolerance mm	: +- 0.05	+ cm3/1000s. : +- 4.0
roterance mm	. +- 0.05	I clib/10003 +- 4.0
Rated speed rpm	: 550	
Pressure hPa		
rack travel mm	: 14.05	+ STARTING FUEL DELIVERY
Tolerance mm	: +- 0.10	+
		+ Rated speed rpm : 100
MEASUREMENT		rack travel mm : 20.25
Datad aread non	: 550	Tolerance mm : +- 0.75 + Del. quantity
Rated speed rpm	: 550	+ cm3/1000 strokes : 135.0
Pressure hPa	: 565	Tolerance
rack travel mm	: 13.60	+ cm3/1000 strokes : +- 5.0
Tolerance mm	: +- 0.10	+ Check tolerance
	<u>-</u>	+ cm3/1000s. : +- 8.0
Pressure hPa	: 650	+
rack travel mm	: 13.95	+
Tolerance mm	: ← 0.05	†
		LOW IDLE
FUEL DELIVERY CHA	ARACTERISTICS	Rated speed rpm : 400
		+
		+ Rack travel in mm : 5.80
Aneroid pressure	. 4000	+ Tolerance mm : + 0.10
hPa	: 1200	+ Del. quantity
Rated speed rpm	: 500	+ cm3/1000 strokes : 17.0 + Tolerance
Del. quantity cm3/1000 strokes	: 155.0	+ cm3/1000 strokes : + 2.0
Tolerance	. 133.0	Check tolerance
cm3/1000 strokes	: +- 2.0	- cm3/1000s. : +- 4.5
Check tolerance		+ Spreed
cm3/1000s.	: ← 5.0	+ Tolerance
Spreed		+ cm3/1000 strokes : 3.5
•		+

Check tolerance cm3/1000s.	:	5.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 18.07.97 Test oil : ISO 4113

Combination No. : 0 403 476 151

Injection pump

Pump designation : PES6MW100/720RS1131 EP type number : 0 413 406 123

Governor

Governer design. : RSV350...1200MW0A405

Governer no. : 0 420 085 294

Cust. part No. : 0270742302

Customer-spec. information
Customer : MB-NFZ
Motor : OM 366 A
Power KW : 118.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. *C : 40 Tolerance *C : +- 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prescroke mm : 3.75
Tolerance mm : +- 0.05
Check
tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance °NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1180

Rack travel in mm : 11.65 Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 89.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance cm3/1000S. : +- 3.0

Spreed

Tolerance cm3/1000 strokes : 3.5	Check tolerance cm3/1000s. : 6.0
cm3/1000s. : 6.0	CONTROL A FUED
	CONTROL LEVER
Rated speed rpm : 350	control lever position degree : 107.0 tolerance degree : +- 4.0
Rack travel in mm: 6.30 - Tolerance mm: + 0.25 - Del. quantity -	RATED SPEED : 10.65
cm3/1000 strokes : 12.0 -	Rated speed rpm : 1233 Tolerance 1/min : +- 3
cm3/1000 strokes : +- 2.0	+
Check tolerance - cm3/1000s. : +- 4.5 - Spreed -	rack travel mm : 4.00 Rated speed rpm : 1315 Tolerance 1/min : +- 5
Tolerance - cm3/1000 strokes : 3.5 - Check tolerance -	rack travel mm : 1.00 Tolerance mm : +- 0.70
cm3/1000s. : 5.5	Rated speed rpm : 1400
(B) SETTING OF INJECTION PUMP WITH G@VERNOR	LOW IDLE
GUIDE SLEEVE POSITION	control lever position degree : 81.0 tolerance degree : +- 4.0
control lever - position degree : - 3	Setting point w/out bumper spring
Rated speed rpm : 800	
Rack travel in mm : 0.65 Tolerance mm : + 0.35	Rated speed rpm : 100 CRT mm min. :> 19.00
_	
governor spring - pre-tension -	- Testing:
governor spring pre-tension click setting x : 5.25	Rated speed rpm : 350 rack travel mm : 6.30
pre-tension -	Rated speed rpm : 350 - rack travel mm : 6.30 - Tolerance mm : + 0.25
pre-tension click setting x : 5.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1180 Aneroid pressure	Rated speed rpm : 350 rack travel mm : 6.30
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1180 Aneroid pressure hPa : 800	Rated speed rpm : 350 rack travel mm : 6.30 Tolerance mm : + 0.25 rack travel mm : 2.00 Rated speed rpm : 450
pre-tension click setting x : 5.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1180 Aneroid pressure hPa : 800 Del. quantity cm3/1000 strokes : 89.0 Tolerance	Rated speed rpm : 350 rack travel mm : 6.30 Tolerance mm : + 0.25 rack travel mm : 2.00 Rated speed rpm : 450 Tolerance 1/min : + 30 TORQUE CONTROL Rated speed rpm : 1180
pre-tension click setting x : 5.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1180 Aneroid pressure hPa : 800 Del. quantity cm3/1000 strokes : 89.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance	Rated speed rpm : 350 rack travel mm : 6.30 Tolerance mm : + 0.25 rack travel mm : 2.00 Rated speed rpm : 450 Tolerance 1/min : + 30 TORQUE CONTROL
pre-tension click setting x : 5.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1180 Aneroid pressure hPa : 800 Del. quantity cm3/1000 strokes : 89.0 Tolerance cm3/1000 strokes : +- 1.0	Rated speed rpm : 350 rack travel mm : 6.30 Tolerance mm : + 0.25 rack travel mm : 2.00 Rated speed rpm : 450 Tolerance 1/min : + 30 TORQUE CONTROL Rated speed rpm : 1180 rack travel mm : 11.65

SETTING Rated speed rpm : 500 Pressure hPa : 800 rack travel mm : 12.00 Tolerance mm : + 0.10 Rated speed rpm : 500 Pressure hPa : - Tolerance mm : + 0.10 MEASUREMENT Rated speed rpm : 500 Pressure hPa : 350 rack travel mm : 1.10 Tolerance mm : + 0.10 Pressure hPa : 275 rack travel mm : 0.65 Tolerance mm : + 0.10 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : 800 Rated speed rpm : 800 Del. quantity cm3/1000 strokes : 88.0 Tolerance cm3/1000 strokes : + 1.5 Check tolerance cm3/1000 strokes : + 1.5 Check tolerance cm3/1000 strokes : 5.0 Check tolerance	Rated speed rpm rack travel mm Tolerance mm	: 1100 : 11.75 : +- 0.10
Pressure hPa : 800 rack travel mm : 12.00 Tolerance mm : + 0.10 Rated speed rpm : 500 Pressure hPa : - Tolerance mm : + 0.10 MEASUREMENT Rated speed rpm : 500 Pressure hPa : 350 rack travel mm : 1.10 Tolerance mm : + 0.10 Pressure hPa : 275 rack travel mm : 0.65 Tolerance mm : + 0.10 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : 800 Rated speed rpm : 800 Del. quantity cm3/1000 strokes : 88.0 Tolerance cm3/1000s : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance	ANEROID/ALTITUDE COMPENSATOR TEST	
Pressure hPa : 800 rack travel mm : 12.00 Tolerance mm : + 0.10 Rated speed rpm : 500 Pressure hPa : - Tolerance mm : + 0.10 MEASUREMENT Rated speed rpm : 500 Pressure hPa : 350 rack travel mm : 1.10 Tolerance mm : + 0.10 Pressure hPa : 275 rack travel mm : 0.65 Tolerance mm : + 0.10 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : 800 Rated speed rpm : 800 Del. quantity cm3/1000 strokes : 88.0 Tolerance cm3/1000s : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance	SETTING	
Pressure hPa : - Tolerance mm : + 0.10 MEASUREMENT Rated speed rpm : 500 Pressure hPa : 350 rack travel mm : 1.10 Tolerance mm : + 0.10 Pressure hPa : 275 rack travel mm : 0.65 Tolerance mm : + 0.10 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : 800 Rated speed rpm : 800 Del. quantity cm3/1000 strokes : 88.0 Tolerance cm3/1000 strokes : + 1.5 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance	Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 800 : 12.00
Rated speed rpm : 500 Pressure hPa : 350 rack travel mm : 1.10 Tolerance mm : + 0.10 Pressure hPa : 275 rack travel mm : 0.65 Tolerance mm : + 0.10 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : 800 Rated speed rpm : 800 Del. quantity cm3/1000 strokes : 88.0 Tolerance cm3/1000 strokes : + 1.5 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance	Pressure hPa	: -
Pressure hPa : 350 rack travel mm : 1.10 Tolerance mm : + 0.10 Pressure hPa : 275 rack travel mm : 0.65 Tolerance mm : + 0.10 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : 800 Rated speed rpm : 800 Del. quantity cm3/1000 strokes : 88.0 Tolerance cm3/1000 strokes : + 1.5 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance	MEASUREMENT	
rack travel mm : 1.10 Tolerance mm : + 0.10 Pressure hPa : 275 rack travel mm : 0.65 Tolerance mm : + 0.10 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : 800 Rated speed rpm : 800 Del. quantity cm3/1000 strokes : 88.0 Tolerance cm3/1000 strokes : + 1.5 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance	Rated speed rpm	: 500
rack travel mm : 0.65 Tolerance mm : + 0.10 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : 800 Rated speed rpm : 800 Del. quantity cm3/1000 strokes : 88.0 Tolerance cm3/1000 strokes : + 1.5 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance	rack travel mm	: 1.10
Aneroid pressure hPa : 800 Rated speed rpm : 800 Del. quantity cm3/1000 strokes : 88.0 Tolerance cm3/1000 strokes : + 1.5 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance	rack travel mm	: 0.65
cm3/1000 strokes : 88.0 Tolerance cm3/1000 strokes : + 1.5 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance	Aneroid pressure hPa Rated speed rpm	: 800
cm3/1000 strokes : + 1.5 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance	cm3/1000 strokes	: 88.0
cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance	cm3/1000 strokes	: + 1.5
cm3/1000 strokes : 5.0 Check tolerance	cm3/1000S. Spreed	: +- 4.0
	cm3/1000 strokes	: 5.0
		: 7.0
	Aneroid pressure hPa	: -

Check tolerance cm3/1000s. : +- 3.0 STARTING FUEL DELIVERY Check hydraulic start locking and unlocking device with 500...1000 hPa. Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 83.0 Tolerance cm3/1000 strokes : +- 5.0 Check tolerance cm3/1000s. : +-8.0 LOW IDLE Rated speed rpm : 350 Rack travel in mm : 6.30 Tolerance mm : +- 0.25 Del. quantity cm3/1000 strokes : 12.0 Tolerance cm3/1000 strokes : +-2.0 Check tolerance cm3/1000S.4.5 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. 5.5 End of test specification sheet

Rated peed rpm : 500

cm3/1000 strokes : +- 1.0

50.0

cm3/1000 strokes :

Del. quantity

Tolerance

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 28.07.97 Test oil : ISO 4113

Combination No. : 0 400 876 275

Injection pump

Pump designation : PES6A95D410RS2471 EP type number : 0 410 896 952

Governor

Governer design. : RSV325...1150A8C674

: -3L

Governer no. : 0 420 232 543

Cust. part No. :

Customer-spec. information

Customer : KHD

Motor : BF6L913C Power KW : 132.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40 Tolerance °C : + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 1.95Tolerance mm : $\leftarrow 0.05$

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5- 3- 6- 2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance °NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1150

Rack travel in mm : 11.85
Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 109.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : +- 3.0

Spreed

Tolerance cm3/1000 strokes : 3.0 Check tolerance	Check tolerance cm3/1000s. : 6.0
cm3/1000s. : 6.0	CONTROL LEVER
Rated speed rpm : 325	control lever position degree : 106.0 tolerance degree : +- 4.0
Rack travel in mm: 6.80 + Tolerance mm: + 0.10 + Del. quantity	RATED SPEED rack travel mm : 10.80
cm3/1000 strokes : 19.0 + Tolerance +	Rated speed rpm : 1195 Tolerance 1/min : +- 5
<pre>cm3/1000 strokes : + 3.0 Check tolerance cm3/1000S. : + 5.5 Spreed</pre>	rack travel mm : 4.00 Rated speed rpm : 1250 Tolerance 1/min : +- 15
Tolerance cm3/1000 strokes : 3.0 + Check tolerance	rack travel mm : 0.85 Tolerance mm : +- 0.55
cm3/1000s. : 5.0	Rated speed rpm : 1400
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	rack travel mm : 4.00 Rated speed rpm : 1300 Tolerance 1/min : +- 15
GUIDE SLEEVE POSITION	LOW IDLE
control lever position degree : -3 Rated speed rpm : 800	control lever position degree : 71.0 tolerance degree : +- 4.0
Rack travel in mm: 0.50 Tolerance mm: + 0.20	Setting point w/out bumper spring
governor spring + pre-tension + click setting x : 4.75	Rated speed rpm : 325 rack travel mm : 7.30 Tolerance mm : + 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 100
Rated speed rpm : 1150	CRT mm min. : > 19.50
Aneroid pressure hPa : 700	Testing:
Del. quantity cm3/1000 strokes : 109.0	Rated speed rpm : 325 rack travel mm : 6.80 Tolerance mm : +- 0.10
cm3/1000 strokes : +- 1.0 +- Check tolerance +-	rack travel mm : 2.00
cm3/1000s. : +- 3.0 +- Spreed +- Tolerance +-	Rated speed rpm : 615 Tolerance 1/min : +- 30
cm3/1000 strokes : 3.0	TORQUE CONTROL

Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm	: 1150 : 11.85 : +- 0.05 : 500 : 11.90 : +- 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 700 : 11.85 : +- 0.05
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 9.90 : +- 0.10
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 160 : 10.55 : + 0.15
Pressure hPa rack travel mm Tolerance mm	: 340 : 11.35 : +- 0.05
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity	: 700 : 850
cm3/1000 strokes Tolerance	: 105.0
cm3/1000 strokes Check tolerance	: +- 1.5
cm3/1000s. Spreed	: +- 4.0
Check tolerance cm3/1000s.	: 7.0

Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 63.0 : + 1.0 : + 3.0
STARTING FUEL DEL	IVERY
Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 100 : 15.70 : +- 0.20 : 125.0 : +- 5.0 : +- 8.0
LOW IDLE	
Rated speed rpm	: 325
Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes	: 6.80 : + 0.10 : 19.0
Tolerance cm3/1000 strokes	: +- 3.0
Check tolerance	
cm3/1000s. Spreed Tolerance	: +- 5.5
cm3/1000 strokes Check tolerance	: 3.0
cm3/1000s.	: 5.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 18.07.97 Edition Test oil : ISO 4113

Combination No. : 0 400 876 407

Injection pump

Pump designation : PES6A95D410RS2835 EP type number : 0 410 896 896

Governor

Governer design. : RSV650...1050A8C2263

: -3L

: 0 420 232 586 Governer no.

Cust. part No. : 87 800 684

Customer-spec. information : NH Customer

: 7.5 L Motor : 138.0 Power KW

TEST BENCH REQUIREMENTS

: 3.1 Inlet line

Test oil inlet

temp. °C Tolerance °C : +- 2.0

: 1 419 992 198 Overflow valve

Inlet press. bar : 1.5

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 bar Tolerance bar

: 1 680 750 008 Test lines

Outside diameter : 6.0 x inside diameter: 2.0

600 x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +- 1.0

Prestroke mm : + 0.05Tolerance mm Check

: + 0.10tolerance mm

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

: 1-5-3-6-2-Firing order

: 0-60-120-180-240 Phasing

: -300

: + 0.50Tolerance

Check

tolerance *NW : + 0.75

BASIC SETTING

750 Rated speed rpm :

Rack travel in mm : 14.00 : +- 0.10 Tolerance mm

Del. quantity

cm3/1000 strokes : 141.0

Tolerance

cm3/1000 strokes : +- 1.0

Tolerance	Check tolerance cm3/1000s. : +- 3.0	Check tolerance cm3/1000s. : +- 3.0 Spreed
Check tolerance	Spreed	Tolerance
cm3/1000s. : 6.0 CONTROL LEVER CONTROL LEVER CONTROL LEVER CONTROL LEVER CONTROL LEVER Rated speed rpm : 91.0 Tolerance degree : + 4.0 CONTROL LEVER ASSEMBLY GOVERNOR SETTING CONTROL LEVER ASSEMBLY GOVERNOR SETTING Rated speed rpm : 1092 rack travel mm : 11.80 Rated speed rpm : 1122 Tolerance 1/min : + 5 rack travel mm : 4.00 rack travel mm : 4.00 CONTROL LEVER Rated speed rpm : 1122 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1125 Rated speed rpm : 1250 Rated speed rpm : 1094 rack travel mm : 4.00 rack travel mm : 11.80 Rated		Check tolerance
Rated speed rpm : 650 Rack travel in mm : 5.50 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 22.0 Tolerance cm3/1000s. : + 3.5 Spreed Tolerance cm3/1000s. : + 3.5 Spreed Tolerance cm3/1000s. : + 3.5 Spreed Tolerance cm3/1000s. : 5.5 Rated speed rpm : 1092 rack travel mm : 11.80 Rated speed rpm : 1122 Tolerance 1/min : + 5 Tolerance 1/min : + 5 Tolerance 1/min : + 5 Tolerance 1/min : + 5 Tolerance 1/min : + 5 Tolerance 1/min : + 5 Tolerance 1/min : + 5 Tolerance 1/min : + 5 Tolerance 1/min : + 5 Tolerance 1/min : + 5 Tolerance 1/min : + 5 Tolerance 1/min : + 5 Tolerance mm : + 0.55 Rated speed rpm : 1250 Rated speed rpm : 1093 rack travel mm : 11.80 Rated speed rpm : 1123 GUIDE SLEEVE POSITION Control lever position degree : - 3 Rated speed rpm : 1250 Rack travel in mm : 0.50 Tolerance mm : + 0.20 Rack travel in mm : 0.50 Tolerance mm : + 0.20 Rack travel in mm : 0.50 Tolerance mm : + 0.20 Rack travel in mm : 0.50 Tolerance mm : + 0.20 Rated speed rpm : 1124 Tolerance 1/min : + 5 Tolerance mm : + 0.55 Rated speed rpm : 1094 rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 1094 rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 1124 Tolerance 1/min : + 5 Tolerance mm : + 0.55 Rated speed rpm : 1094 rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 1094 rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 1250 Rated speed rpm : 1095 rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 1095 rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 1095 rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 1095 rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 1095 rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 1095 rack travel mm : 11.80 Rated speed rpm : 1095 rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 1095 rack travel mm : 11.80 Rated speed rpm : 1095 rack travel mm : 11.80 Rated speed rpm : 1095 rack travel mm : 11.80 Rated speed rpm : 1095 rack travel mm : 11.80 Rated speed rpm : 1095		CONTROL LEVED
Rated speed rpm : 650 Rack travel in mm : 5.50 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 22.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000S. : + 3.5 Spreed Tolerance cm3/1000S. : + 3.5 Check tolerance cm3/1000S. : 5.5 Check tolerance cm3/1000S. : 5.5 Check tolerance cm3/1000S. : 5.5 Check tolerance cm3/1000S. : 5.5 Check tolerance cm3/1000S. : 5.5 Check tolerance cm3/1000S. : 5.5 Check tolerance cm3/1000S. : 5.5 Check tolerance cm3/1000S. : 5.5 Check tolerance cm3/1000S. : 5.5 Tolerance mm : + 0.55 Rated speed rpm : 1093 rack travel mm : 0.85 Tolerance 1/min : + 5 rack travel mm : 11.80 Rated speed rpm : 1093 rack travel mm : 11.80 Rated speed rpm : 1093 rack travel mm : 11.80 Rated speed rpm : 1093 rack travel mm : 11.80 Rated speed rpm : 1095 rack travel mm : 0.55 Rated speed rpm : 1250 Rated speed rpm : 1094 rack travel mm : 11.80 Rated speed rpm : 1094 rack travel mm : 11.80 Rated speed rpm : 1094 rack travel mm : 4.00 rack travel mm : 0.55 Rated speed rpm : 1094 rack travel mm : 11.80 Rated speed rpm : 1094 rack travel mm : 4.00 rack travel mm : 4.00 Rated speed rpm : 1094 rack travel mm : 4.00 rack travel mm : 4.00 Rated speed rpm : 1094 rack travel mm : 4.00 rack travel mm : 4.00 rack travel mm : 4.00 Rated speed rpm : 1094 rack travel mm : 4.00 rack travel mm : 4.00 Rated speed rpm : 1094 rack travel mm : 4.00 Rated speed rpm : 1095 rack travel mm : 4.00 rack travel mm : 4.00 Rated speed rpm : 1095 rack travel mm : 4.00 rack travel mm : 4.00 rack travel mm : 4.00 rack travel mm : 4.00 rack travel mm : 4.00 rack travel mm : 4.00 rack travel mm : 4.00 rack travel mm : 4.00 rack travel mm : 4.00 rack travel mm : 4.00 rack travel mm : 11.80 Rated speed rpm : 1095 rack travel mm : 4.00 rack travel mm : 4.00 rack travel mm : 4.00 rack travel mm : 11.80 Rated speed rpm : 1094 rack travel mm : 11.80 Rated speed rpm : 1095 rack travel mm : 4.00 Rated speed rpm : 1095 rack travel mm : 4.00 rack travel mm : 11.80 Rated speed rpm : 1095 r	 ‡	
Tolerance mm	Rated speed rpm : 650	position degree : 91.0
cm3/1000 strokes : 22.0 Rated speed rpm : 1092 ra3/1000 strokes : + 2.0 rack travel mm : 11.80 Check tolerance cm3/1000s. : + 3.5 Rated speed rpm : 1122 Spreed Tolerance 1/min : + 5 Tolerance cm3/1000 strokes : 3.5 rack travel mm : 4.00 Check tolerance cm3/1000s. : 5.5 rack travel mm : + 0.55 Rated speed rpm : 1250 Rated speed rpm : 1093 (B) SETTING OF INJECTION PUMP WITH GOVERNOR Rated speed rpm : 1093 GUIDE SLEEVE POSITION Rated speed rpm : 1123 GUIDE SLEEVE POSITION Tolerance 1/min : + 5 rack travel mm : 4.00 rack travel mm : 4.00 control lever position degree : - 3 rack travel mm : 0.85 Rated speed rpm : 800 Rated speed rpm : 1250 Rack travel in mm : 0.50 Rated speed rpm : 1094 Tolerance mm : + 0.20 Rated speed rpm : 1094 governor spring pre-tension click setting x : 2.50 Rated speed rpm : 1124 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 0.85 Rated speed rpm : 250 Rated speed rpm : 1095 Rated speed rpm : 1095 rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 1095 Rated speed rpm : 1095	Tolerance mm : +- 0.10	ASSEMBLY COVERNOR SETTING
cm3/1000 strokes : + 2.0	cm3/1000 strokes : 22.0 +	
cm3/1000S. : + 3.5 Rated speed rpm : 1122 Spreed Tolerance 1/min : + 5 Tolerance : 4.00 cm3/1000 strokes : 3.5 Check tolerance : 0.85 cm3/1000S. : 5.5 Check tolerance : 0.85 cm3/100OS. : 5.5 Check tolerance : 0.85 cm3/100OS. : 5.5 Rated speed rpm : 1093 rack travel mm : 1093 rack travel mm : 1128 GUIDE SLEEVE POSITION Rated speed rpm : 1128 Control lever rack travel mm : 0.85 position degree : - 3 Rated speed rpm : 1250 Rack travel imm : 0.55 Rated speed rpm : 1094 rack travel mm : 0.55 Rated speed rpm : 1094 rack travel mm : 1094 rack travel mm : 1094	cm3/1000 strokes : +- 2.0	Rated speed rpm : 1092 rack travel mm : 11.80
cm3/1000 strokes : 3.5 7.5 cm3/1000s. : 5.5 7.5 rack travel mm : - 0.55 Rated speed rpm : 1250 (B) SETTING OF INJECTION PUMP WITH GOVERNOR Rated speed rpm : 1093 rack travel mm : 11.80 Rated speed rpm : 1123 Tolerance 1/min : + 5 rack travel mm : 4.00 control lever rack travel mm : 0.85 position degree : - 3 Rated speed rpm : 1250 Rack travel in mm : 0.50 Tolerance mm : + 0.55 Rated speed rpm : 1250 Rated speed rpm : 1094 rack travel mm : 1.80 11.80 governor spring pre-tension click setting x : 2.50 Rated speed rpm : 1124 rolerance 1/min : + 5 5 rack travel mm : 4.00 1250 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Rated speed rpm : 750 Rated speed rpm : 1250 Aneroid pressure hPa : 800 Rated speed rpm : 1250 Aneroid pressure hPa : 800 Rated speed rpm : 1095 rack travel mm : 1.80 1.80 rack travel mm : 1.80 1.80 rack travel mm : 1.80 1.80	cm3/1000s. : +- 3.5	
Check tolerance rack travel mm : 0.85 cm3/1000s. : 5.5 Tolerance mm : + 0.55 Rated speed rpm : 1250 (B) SETTING OF INJECTION PUMP Rated speed rpm : 1093 WITH GOVERNOR Rated speed rpm : 1123 GUIDE SLEEVE POSITION Tolerance 1/min : + 5 rack travel mm : 4.00 control lever rack travel mm : 0.85 position degree : - 3 Tolerance mm : + 0.55 Rated speed rpm : 1250 Rack travel in mm : 0.50 Rated speed rpm : 1094 Tolerance mm : + 0.20 Rated speed rpm : 11.80 governor spring pre-tension Rated speed rpm : 1124 click setting x : 2.50 Rated speed rpm : 1124 Tolerance 1/min : + 5 rack travel mm : 0.85 FULL LOAD DELIVERY AT FULL LOAD STOP rack travel mm : 0.85 Rated speed rpm : 0.55 Rated speed rpm : 1095 rack travel mm : 0.55 Rated speed rpm : 1095 rack travel mm : 0.55		rack travel mm : 4.00
Rated speed rpm : 1250	Check tolerance	
### WITH GOVERNOR ### Rated speed rpm : 1093	1	
GUIDE SLEEVE POSITION Control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 Rack travel in mm : 0.20 Rated speed rpm : 1094 rack travel mm : 11.80 governor spring pre-tension click setting x : 2.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1124 Tolerance 1/min : + 5 rack travel mm : 11.80 Rated speed rpm : 1124 Tolerance 1/min : + 5 rack travel mm : 0.85 Tolerance 1/min : + 5 rack travel mm : 0.85 Rated speed rpm : 10.85 Rated speed rpm : 1.55	=	
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 Rack travel in mm : 0.20 Rated speed rpm : 1094 rack travel mm : 11.80 governor spring pre-tension click setting x : 2.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 124 Tolerance 1/min : + 5 rack travel mm : 4.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 1250 Rated speed rpm : 1095 Rated speed rpm : 1095 rack travel mm : 1095 rack travel mm : 11.80 Tolerance pa : 800 Del quantity cm3/1000 strokes : 141.0 Tolerance cm3/1000 strokes : + 1.0 Rated speed rpm : 1095 rack travel mm : 11.80		
position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 Rated speed rpm : 1094 rack travel mm : 11.80 governor spring pre-tension click setting x : 2.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 1250 Rated speed rpm : 1095 rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 1250 Aneroid pressure hPa : 800 Del. quantity cm3/1000 strokes : 141.0 Tolerance cm3/1000 strokes : + 1.0 Rated speed rpm : 1095 rack travel mm : 11.80 Rated speed rpm : 11.80	GUIDE SLEEVE POSITION	
Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 Rated speed rpm : 1094 rack travel mm : 11.80 governor spring pre-tension click setting x : 2.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1124 Tolerance 1/min : + 5 rack travel mm : 4.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 1250 Aneroid pressure hPa : 800 Del. quantity cm3/1000 strokes : 141.0 Tolerance cm3/1000 strokes : + 1.0 Rated speed rpm : 1095 rack travel mm : 1095 rack travel mm : 11.80 Rated speed rpm : 1125		
Tolerance mm : + 0.20 governor spring pre-tension click setting x : 2.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1124 Tolerance 1/min : + 5 rack travel mm : 4.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 750 Aneroid pressure hPa : 800 Del. quantity cm3/1000 strokes : 141.0 Tolerance cm3/1000 strokes : + 1.0 Rated speed rpm : 1095 rack travel mm : 1095 Rated speed rpm : 1095 rack travel mm : 11.80 Rated speed rpm : 11.80	Rated speed rpm : 800	
governor spring pre-tension click setting x : 2.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 750 Aneroid pressure hPa : 800 Del. quantity cm3/1000 strokes : 141.0 Tolerance cm3/1000 strokes : + 1.0 Rated speed rpm : 1124 Tolerance 1/min : + 5 rack travel mm : 4.00 rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 1250 Rated speed rpm : 1095 rack travel mm : 11.80 Rated speed rpm : 11.80 Rated speed rpm : 11.80 Rated speed rpm : 11.80	Rack travel in mm: 0.50	Pated speed rpm · 100/
rack travel mm : 1124 Tolerance 1/min : + 5 rack travel mm : 4.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 750 Aneroid pressure hPa : 800 Del. quantity cm3/1000 strokes : 141.0 Tolerance cm3/1000 strokes : + 1.0 Rated speed rpm : 124 Tolerance 1/min : + 5 rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 1250 Rated speed rpm : 1095 rack travel mm : 11.80 Tolerance cm3/1000 strokes : + 1.0	+	rack travel mm : 11.80
rack travel mm : 4.00 FULL LOAD DELIVERY AT FULL LOAD STOP rack travel mm : 0.85 Rated speed rpm : 750 Rated speed rpm : 1250 Aneroid pressure hPa : 800 Del. quantity Rated speed rpm : 1095 cm3/1000 strokes : 141.0 rack travel mm : 11.80 Tolerance cm3/1000 strokes : + 1.0 Rated speed rpm : 125	pre-tension +	Rated speed rpm : 1124
Aneroid pressure hPa : 800 Del. quantity	click setting x : 2.50	
Aneroid pressure hPa : 800 Del. quantity	FULL LOAD DELIVERY AT FULL LOAD STOP	rack travel mm : 0.85
hPa : 800 + Rated speed rpm : 1095 cm3/1000 strokes : 141.0 + rack travel mm : 11.80 Tolerance cm3/1000 strokes : + 1.0 + Rated speed rpm : 1125		Rated speed rpm : 1250
Tolerance + Rated speed rpm : 1125	hPa : 800 +	Dated aread are a 1000
cm3/1000 strokes : + 1.0	cm3/1000 strokes : 141.0 +	rack travel mm : 11.80
		Rated speed rpm : 1125 Tolerance 1/min : +- 5

rack travel mm :	4.00	Rated speed rpm : 1050
	+	rack travel mm : 12.50
rack travel mm :	0.85	Tolerance mm : +- 0.10
Tolerance mm : +	~ 0.55 }	
Rated speed rpm :	1250	Rated speed rpm : 1050
(4.1)	<u> </u>	rack travel mm : 12.80 Tolerance mm : +- 0.10
	1	Tolerance mm · +- 0 10
Rated speed rpm :	1096	Total area min
rack travel mm :	11.80	Rated speed rpm : 960
I dev ci dace iikii	T	rack travel mm : 13.60
Datad annud mm	1124	
Rated speed rpm :	1126	Tolerance mm : +- 0.15
	•	
rack travel mm :	4.00 +	ANDDOTO /AL TITUDE
	†	ANEROID/ALTITUDE
	0.85	COMPENSATOR TEST
	- 0.55	
Rated speed rpm :	1250 +	
	+	SETTING
	+	
Rated speed rpm :	1097	Rated speed rpm : 500
rack travel mm :	11.80	Pressure hPa : 800
	1	rack travel mm : 14.00
Rated speed rpm :	1127	Tolerance mm : + 0.10
Tolerance 1/min : +	_ 1	
rack travel mm :	4.00	Rated speed rpm : 500
rack cravet man	1	Pressure hPa : -
rack travel mm :	0.85	rack travel mm : 9.00
Tolerance mm : +		Tolerance mm : + 0.10
Rated speed rpm :		roceratice min O. to
Rated Speed (pill .	1230	MEASUREMENT
		HEASOKEHEI41
LOW IDLE		Rated speed rpm : 500
LOW TOLE	Ţ	Rated speed rpm : 500
	Ť	Danas - 725
	Ť	Pressure hPa : 325 rack travel mm : 11.15
control lever	7.0	
position degree :		Tolerance mm : + 0.20
tolerance degree : +	- 4.0 +	
	. †	Pressure hPa : 550
Setting point w/out bu	umper spring +	rack travel mm : 13.45
	+	Tolerance mm : + 0.05
	650 +	
	5.00	
Tolerance mm : +	- 0.10 +	
	+	FUEL DELIVERY CHARACTERISTICS
Testing:	+	
	+	
Rated speed rpm :	650	Aneroid pressure
rack travel mm : Tolerance mm : +	5.50	hPa : -
Tolerance mm : +	- 0.10 	Rated speed rpm : 500
	1	Del. quantity
rack travel mm :	2.00	cm3/1000 strokes : 77.0
Rated speed rpm :	780	Tolerance
Tolerance 1/min : +		cm3/1000 strokes : + 2.0
TOTAL CONTROL OF THE PARTY OF T	I	Check tolerance
		cm3/1000s. : +- 4.5
TORQUE CONTROL	I	UND/ 10000
	750	
rack travel mm :		STARTING FUEL DELTHERY
Tolerance mm : +	- 0.10 +	STARTING FUEL DELIVERY
	1	

Rated speed rpm rack travel mm Tolerance mm	:	100 20.00 0.20
Del. quantity	• '	-1
cm3/1000 strokes Tolerance	:	197.0
cm3/1000 strokes	: +-	10.0
Check tolerance cm3/1000S.	: +-	13.0

LOW IDLE

Rated speed rpm : 650 5.50 Rack travel in mm : Tolerance mm 0.10 Del. quantity 22.0 cm3/1000 strokes : Tolerance cm3/1000 strokes : +- 2.0Check tolerance cm3/1000s. : **←** 3.5 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. 5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 25.07.97 Edition Test oil : ISO 4113

Combination No. : 0 402 076 753

Injection pump

Pump designation : PES6P120A720RS3203 EP type number : 0 412 026 728

Governor

Governer design. : RSV400...1100P2A534

: -13

Governer no. : 0 421 833 403

Cust. part No. : RE50748

Customer-spec. information : DEERE Customer

: 6076 AF & HF Motor

: 186.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 2.

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 1 457 413 010

Inlet press. bar : 1.5

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 bar Tolerance bar : +- 1.5

Test Lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter : x Length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 17.0 Tolerance bar : +- 1.0

Prestroke mm 3.60 : +- 0.05 Tolerance mm

Check

tolerance mm : + 0.10

Rack travel in mm: 10.50 Tolerance mm : +- 0.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : **←** 0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

*NW after s.o.d. : 10.50 : **←** 0.50

Tolerance

Check

tolerance °NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm: 12.25

Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes	: 156.0	
Tolerance cm3/1000 strokes	: + 1.0	CONTROL LEVER
	+	control lever
Check tolerance cm3/1000s.	: +- 3.0	position degree : 99.0 tolerance degree : +- 4.0
Spreed		RATED SPEED rack travel mm : 11.20
Talamana	T	
Tolerance cm3/1000 strokes	: 4.0	Rated speed rpm : 1155 Tolerance 1/min : +- 5
Charle tal anomas		made through mm.
Check tolerance	, <u>, , , , , , , , , , , , , , , , , , </u>	rack travel mm : 4.00
cm3/1000s.	: 6.5	Rated speed rpm : 1230 _
	+	Tolerance 1/min : +- 5
	+	
	+	rack travel mm : 0.85
	1	Tolerance mm : +- 0.55
Rack travel in mm): 5.40	Rated speed rpm : 1400
Tolerance mm		Nated Speed Pall : 1400
roterance mm	T	rack travel mm : 4.00
	Ť	
	·· †	Rated speed rpm : 1235
(B) SETTING OF IN	JECTION PUMP +	Tolerance 1/min : +- 15
WITH GOVERNOR	+	
	+	
	1	
CHILD OF FELL DOCT	T	101 TOLE
GUIDE SLEEVE POSI	1100	LOW IDLE
	+	
	+	
control lever	+	control lever
position degree	: - 3	position degree : 76.0
Rated speed rpm		tolerance degree : +- 4.0
kated speed rpill	· 000 T	toterance degree . ** 4.0
	1	
Rack travel in mm	· · · · · · · · · · · · · · · · · · ·	Setting point w/out bumper spring
Tolerance mm		occerning points woods bumper opining
	: +- 0.20 +	occerning points whose bumper optiming
	: +- 0.20	
governor spring	: +- 0.20	Rated speed rpm : 400
governor spring	: +- 0.20	Rated speed rpm : 400 rack travel mm : 5.90
pre-tension	+	Rated speed rpm : 400
	+	Rated speed rpm : 400 rack travel mm : 5.90 Tolerance mm : + 0.10
pre-tension	+	Rated speed rpm : 400 rack travel mm : 5.90
pre-tension click setting x	: 4.50	Rated speed rpm : 400 rack travel mm : 5.90 Tolerance mm : + 0.10 Rated speed rpm : 100
pre-tension click setting x	+	Rated speed rpm : 400 rack travel mm : 5.90 Tolerance mm : + 0.10
pre-tension click setting x	: 4.50	Rated speed rpm : 400 rack travel mm : 5.90 Tolerance mm : + 0.10 Rated speed rpm : 100
pre-tension click setting x FULL LOAD DELIVER	: 4.50 Y AT FULL LOAD STOP	Rated speed rpm : 400 rack travel mm : 5.90 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.00
re-tension click setting x FULL LOAD DELIVER Rated speed rpm	: 4.50	Rated speed rpm : 400 rack travel mm : 5.90 Tolerance mm : + 0.10 Rated speed rpm : 100
FULL LOAD DELIVER Rated speed rpm Aneroid pressure	: 4.50 Y AT FULL LOAD STOP : 1100	Rated speed rpm : 400 rack travel mm : 5.90 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.00 Testing:
FULL LOAD DELIVER Rated speed rpm Aneroid pressure hPa	: 4.50 Y AT FULL LOAD STOP	Rated speed rpm : 400 rack travel mm : 5.90 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.00 Testing: Rated speed rpm : 400
FULL LOAD DELIVER Rated speed rpm Aneroid pressure hPa Del. quantity	: 4.50 Y AT FULL LOAD STOP : 1100 : 1200	Rated speed rpm : 400 rack travel mm : 5.90 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.00 Testing: Rated speed rpm : 400 rack travel mm : 5.40
FULL LOAD DELIVER Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes	: 4.50 Y AT FULL LOAD STOP : 1100 : 1200	Rated speed rpm : 400 rack travel mm : 5.90 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.00 Testing: Rated speed rpm : 400
FULL LOAD DELIVER Rated speed rpm Aneroid pressure hPa Del. quantity	: 4.50 Y AT FULL LOAD STOP : 1100 : 1200 : 156.0	Rated speed rpm : 400 rack travel mm : 5.90 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.00 Testing: Rated speed rpm : 400 rack travel mm : 5.40
FULL LOAD DELIVER Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes	: 4.50 Y AT FULL LOAD STOP : 1100 : 1200 : 156.0	Rated speed rpm : 400 rack travel mm : 5.90 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.00 Testing: Rated speed rpm : 400 rack travel mm : 5.40
FULL LOAD DELIVER Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: 4.50 Y AT FULL LOAD STOP : 1100 : 1200 : 156.0	Rated speed rpm : 400 rack travel mm : 5.90 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.00 Testing: 400 Rated speed rpm : 400 rack travel mm : 5.40 Tolerance mm : + 0.10
FULL LOAD DELIVER Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: 4.50 Y AT FULL LOAD STOP : 1100 : 1200 : 156.0 : + 1.0	Rated speed rpm : 400 rack travel mm : 5.90 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.00 Testing: Rated speed rpm : 400 rack travel mm : 5.40 Tolerance mm : + 0.10 TORQUE CONTROL
FULL LOAD DELIVER Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 4.50 Y AT FULL LOAD STOP : 1100 : 1200 : 156.0	Rated speed rpm : 400 rack travel mm : 5.90 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.00 Testing: Rated speed rpm : 400 rack travel mm : 5.40 Tolerance mm : + 0.10 TORQUE CONTROL Rated speed rpm : 1100
FULL LOAD DELIVER Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed	: 4.50 Y AT FULL LOAD STOP : 1100 : 1200 : 156.0 : + 1.0	Rated speed rpm : 400 rack travel mm : 5.90 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.00 Testing: Rated speed rpm : 400 rack travel mm : 5.40 Tolerance mm : + 0.10 TORQUE CONTROL Rated speed rpm : 1100 rack travel mm : 12.25
FULL LOAD DELIVER Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000S. Spreed Tolerance	: 4.50 Y AT FULL LOAD STOP : 1100 : 1200 : 156.0 : + 1.0 : + 3.0	Rated speed rpm : 400 rack travel mm : 5.90 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.00 Testing: Rated speed rpm : 400 rack travel mm : 5.40 Tolerance mm : + 0.10 TORQUE CONTROL Rated speed rpm : 1100
FULL LOAD DELIVER Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes	: 4.50 Y AT FULL LOAD STOP : 1100 : 1200 : 156.0 : + 1.0 : + 3.0	Rated speed rpm : 400 rack travel mm : 5.90 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.00 Testing: Rated speed rpm : 400 rack travel mm : 5.40 Tolerance mm : + 0.10 TORQUE CONTROL Rated speed rpm : 1100 rack travel mm : 12.25 Tolerance mm : + 0.05
FULL LOAD DELIVER Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000S. Spreed Tolerance	: 4.50 Y AT FULL LOAD STOP : 1100 : 1200 : 156.0 : + 1.0 : + 3.0	Rated speed rpm : 400 rack travel mm : 5.90 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.00 Testing: : 400 rack travel mm : 5.40 Tolerance mm : + 0.10 TORQUE CONTROL Rated speed rpm : 1100 rack travel mm : 12.25 Tolerance mm : + 0.05 Rated speed rpm : 650
FULL LOAD DELIVER Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes	: 4.50 Y AT FULL LOAD STOP : 1100 : 1200 : 156.0 : + 1.0 : + 3.0	Rated speed rpm : 400 rack travel mm : 5.90 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.00 Testing: Rated speed rpm : 400 rack travel mm : 5.40 Tolerance mm : + 0.10 TORQUE CONTROL Rated speed rpm : 1100 rack travel mm : 12.25 Tolerance mm : + 0.05

	
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1200 : 13.50 : +- 0.10
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 11.00 : +- 0.10
MEASUREMENT	
Rated speed rpm	: 500
Pressure ha rack travel mm Tolerance mm	: 850 : 12.75 : ← 0.05
Pressure hPa rack travel mm Tolerance mm	: 590 : 11.30 : ← 0.20
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity	: 1200 : 650
cm3/1000 strokes Tolerance	
cm3/1000 strokes Check tolerance cm3/1000s.	: +- 2.0 : +- 4.0
Aneroid pressure	: - : 800
hPa Rated speed rpm	
Rated speed rpm Del. quantity cm3/1000 strokes	: 120.0
Rated speed rpm Del. quantity	: 120.0 : +- 2.0

Rated speed rpm rack travel mm Tolerance mm	:	+-	100 20.50 0.50
Del. quantity cm3/1000 strokes Tolerance	:		100.0
cm3/1000 strokes Check tolerance cm3/1000s.	:	+	10.0
	:	+-	15.0

LOW IDLE

Rack travel in mm : 5.40 Tolerance mm : + 0.10

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 09.06.97 Edition : ISO 4113 Test oil

Combination No. : 0 402 076 755

Injection pump

Pump designation : PES6P110A320LS3318

EP type number : 0 412 016 741

Governor

Governer design. : RSV350...750P4A561

Governer no. : 0 421 833 406

Cust. part No. : 1820271092

Customer-spec. information : NAVISTAR Customer Motor : DTA-466 Power KW : 185.0

TEST BENCH REQUIREMENTS

Inlet line : 2.4

Test oil inlet

temp. °C 40 Tolerance °C : +- 2.0

Overflow valve : 1 417 413 076

Inlet press. bar : 2.8 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 bar Tolerance bar : +- 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter : 3.0 600 x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm 3.00 : +- 0.05 Tolerance mm

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

: +- 0.50 Tolerance

Check

tolerance *NW : +- 0.75

Start of delivery blocking

: +- 0.50 Tolerance

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

700 Rated speed rpm :

Rack travel in mm: 12.85 : +- 0.05 Tolerance mm

Del. quantity

cm3/1000 strokes : 219.0

Toterance +	Tolerance
cm3/1000 strokes : + 1.0	cm3/1000 strokes : +- 1.0 Check tolerance
Check tolerance +	cm3/1000s. : +- 3.0
cm3/1000S. : + 3.0 +	Spreed
Spreed	Tolerance cm3/1000 strokes : 4.0
1	Check tolerance
Tolerance	cm3/1000s. : 6.5
cm3/1000 strokes : 4.0	
Check tolerance	
cm3/1000s. : 6.5	CONTROL LEVER
	control lever
Ţ	position degree : 94.0
Rated speed rpm : 350	tolerance degree : +- 4.0
Park through the property 5-70	DATED COEFA
Rack travel in mm : 5.70 + Tolerance mm : +- 0.10 +	RATED SPEED rack travel mm : 11.50
Del. quantity	Rated speed rpm : 755
cm3/1000 strokes : 40.0	Tolerance 1/min : +- 5
Tolerance + 2.0 +	rack travel mm : 4.00
Check tolerance	Rated speed rpm : 795
cm3/1000s. : + 4.5	Tolerance 1/min : +- 5
Spreed +	rack travel mm : 0.85
Tolerance + cm3/1000 strokes : 8.0 +	Tolerance mm : + 0.55
Check tolerance	Rated speed rpm : 900
cm3/1000s. : 12.0 +	
1	rack travel mm : 4.00 Rated speed rpm : 800
(B) SETTING OF INJECTION PUMP	Tolerance 1/min : + 5
WITH GOVERNOR	
1	
GUIDE SLEEVE POSITION +	LOW IDLE
1	
control lever	control lever
position degree : - 3	position degree : 74.0
Rated speed rpm : 800	tolerance degree : +- 4.0
Rack travel in mm: 0.50	Setting point w/out bumper spring
Tolerance mm : + 0.20 +	
governor spring +	Rated speed rpm : 100
pre-tension +	CRT mm min. : > 19.00
click setting x : 2.50	
<u> </u>	Testing:
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 350
+	rack travel mm : 5.70
Rated speed rpm : 700	Tolerance mm : +- 0.10
Aneroid pressure	
Del. quantity	TORQUE CONTROL
cm3/1000 strokes : 219.0	Rated speed rpm : 700

rack travel mm : 12.85 Tolerance mm : +- 0.05

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : + 0.50

Del. quantity

cm3/1000 strokes : 155.0

Tolerance

cm3/1000 strokes : + 20.0

Check tolerance

cm3/1000s. : +- 25.0

LOW IDLE

Rated speed rpm : 350

Rack travel in mm: 5.70
Tolerance mm: + 0.10
Del. quantity

cm3/1000 strokes : 40.0

Tolerance

cm3/1000 strokes : + 2.0

Check tolerance

cm3/1000s. : +- 4.5

Spreed Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 25.07.97 Edition : ISO 4113 Test oil

Combination No. : 0 402 076 756

Injection pump

Pump designation : PES6P100A320LS3317 EP type number : 0 412 006 706

Governor

Governer design. : RSV400...1200P5A587

Governer no. : 0 421 833 446

Cust. part No. : 1820269091

Customer-spec. information Customer : NAVISTAR : DTA-466 Motor Power KW : 204.0

TEST BENCH REQUIREMENTS

Inlet line : 2.4

Test oil inlet

40 temp. °C : +- 2.0 Tolerance °C

Overflow valve : 1 417 413 076

Inlet press. bar : 2.8 Tolerance bar : + 0.1 Inlet press. bar :

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

: 208.5 bar Tolerance bar : +- 1.5

Test Lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

: 3.00 : ← 0.05 Prestroke mm Tolerance mm Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5- 3- 6- 2-

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50 Check

tolerance °NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1200

Rack travel in mm : 14.65 Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 176.5

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +- 3.0

Spreed

Tolerance	
cm3/1000 strokes	: 8.0
Check tolerance cm3/1000s.	: 12.0
CIII37 10003,	. 12.0
Dari kanasat ta ma	5 20
Rack travel in mm Tolerance mm	: 5.20 : +- 0.10
(B) SETTING OF IN	JECTION PUMP
WITH GOVERNOR	
GUIDE SLEEVE POSI	TION
control lever	
position degree	
Rated speed rpm	: 800
Rack travel in mm	
Tolerance mm	: + 0.20
governor spring	
pre-tension	7 00
click setting x	: 3.50
FULL LOAD DELTHED	Y AT FULL LOAD STOP
FULL EOAD DELIVER	I AT FULL LUMD STOP
Rated speed rpm	: 1200
Aneroid pressure hPa	: 1500
Del. quantity	
cm3/1000 strokes	: 176.5
Tolerance cm3/1000 strokes	: +- 1.0
Check tolerance	
cm3/1000S.	: + 3.0
Spreed	
Tolerance	. • •
cm3/1000 strokes Check tolerance	: 8.0
cm3/1000S.	: 12.0
	. 2. 2
CONTROL A FUET	
CONTROL LEVER	
control lever	405.0
position degree	: 105.0 : +- 4.0
tolerance degree	 4.0
RATED SPEED	4=
mack thaval mm	• 17 40

Rated speed rpm Tolerance 1/min	: 1245 : + 5
rack travel mm Rated speed rpm Tolerance 1/min	: 4.00 : 1315 : +- 5
rack travel mm Tolerance mm Rated speed rpm	: 0.85 : +- 0.55 : 1400
rack travel mm Rated speed rpm Tolerance 1/min	: 4.00 : 1320 : + 5
LOW IDLE	P Paladarhada Artiferia del Malado del con del cardina da anada surran de
control lever position degree tolerance degree	: 75.0 : +- 4.0
Setting point w/o	ut bumper spring
Rated speed rpm	: 100
CRT mm min.	: > 19.00
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 400 : 5.20 : + 0.10
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 1200 : 14.65 : + 0.05
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 1200 : 1500 : 14.65 : +- 0.05
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 8.40 : +- 0.20

rack travel mm : 13.60

MEASUREMENT

Rated speed rpm : 1200

Pressure hPa : 650 rack travel mm : 13.20 Tolerance mm : + 0.20

Pressure hPa : 240 rack travel mm : 9.55 Tolerance mm : + 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : -Rated speed rpm : 500

Del. quantity

cm3/1000 strokes : 72.0

Tolerance

cn3/1000 strokes : +- 2.0

Check tolerance

cm3/1000s. : +- 4.0

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : $\leftarrow 0.50$

Del. quantity

cm3/1000 strokes : 145.0

Tolerance

cm3/1000 strokes : +- 20.0

Check tolerance

cm3/1000s. : +- 25.0

LOW IDLE

Rack travel in mm: 5.20 Tolerance mm: + 0.10

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 25.07.97 Edition : ISO 4113 Test oil

Combination No. : 0 402 076 764

Injection pump

Pump designation : PES6P110A720RS3083

: -1

EP type number : 9 410 231 027

Governor

Governer design. : RSV425...1100P2A582

Governer no. : 0 421 833 439

Cust. part No. : RE23748

Customer-spec. information Customer : DEERE Motor : 6466 A Power KW : 161.0

TEST BENCH REQUIREMENTS

Test oil inlet

: 40 temp. °C Tolerance °C : + 2.0

Overflow valve : 1 457 413 010

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0

F08

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : +- 1.0

Prestroke mm : 3.50 Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

: +- 0.50 Tolerance

Check

tolerance *NW : +- 0.75

Start of delivery mark

*NW after s.o.d. : 13.00

Tolerance : + 0.50

Check

tolerance *NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 12.05 Tolerance mm : +- 0.05

Del. quantity

cm3/100C strokes : 131.5

Tolerance cm3/1000 strokes : +- 1.0	tolerance degree : +- 4.0
Check tolerance cm3/1000s. : + 3.0	+ RATED SPEED + rack travel mm : 11.00 + Rated speed rpm : 1160 + Tolerance 1/min : +- 5
Spreed	+
Tolerance cm3/1000 strokes : 4.0	rack travel mm : 4.00 Rated speed rpm : 1240 Tolerance 1/min : +- 5
Check tolerance cm3/1000s. 6.5	rack travel mm : 0.85 Tolerance mm : +- 0.55 Rated speed rpm : 1350
Pack travel in mm: 5.00 Tolerance mm: +- 0.10	rack travel mm : 4.00 Rated speed rpm : 1245 Tolerance 1/min : +- 15
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	LOW IDLE
GUIDE SLEEVE POSITION	control lever position degree : 75.0 tolerance degree : +- 4.0
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20	Setting point w/out bumper spring Rated speed rpm : 425 rack travel mm : 6.50 Tolerance mm : + 0.10
Toter arice in	Rated speed rpm : 100
FULL LOAD DELIVERY AT FULL LOAD STOP	CRT mm min. : > 19.00
Rated speed rpm : 1100	Testing:
Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 131.5 Tolerance	Rated speed rpm : 425 rack travel mm : 6.00 Tolerance mm : + 0.10
<pre>cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000S. : +- 3.0 Spreed Tolerance</pre>	TORQUE CONTROL Rated speed rpm : 1100 rack travel mm : 12.05 Tolerance mm : +- 0.05
cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 6.5	Rated speed rpm : 700 rack travel mm : 13.20 Tolerance mm : + 0.10
CONTROL LEVER	ANEROID/ALTITUDE COMPENSATOR TEST
control lever position degree : 100.0	‡

F09

SETTING

Rated speed rpm : 500
Pressure hPa : 1200
rack travel mm : 13.20 Tolerance mm : +- 0.10

Rated speed rpm : 500 Pressure hPa : - rack travel mm : 11.20 Tolerance mm : **←** 0.10

MEASUREMENT

Rated speed rpm : 500

Pressure hPa : 200 rack travel mm : 11.60 Tolerance mm : +- 0.20

Pressure hPa : 375
rack travel mm : 12.55
Tolerance mm : + 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

: 1200 Rated speed rpm : 700 Del. quantity

cm3/1000 strokes : 154.0

Tolerance

cm3/1000 strokes : +- 2.0Check tolerance

: +- 4.0 cm3/1000s.

Aneroid pressure

hPa Rated speed rpm : 500 Del. quantity

cm3/1000 strokes : 107.0

Tolerance

cm3/1000 strokes : +- 2.0

Check tolerance

cm3/1000s.: +- 5.0

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : + 0.50 Del. quantity

cm3/1000 strokes : 160.0

Tolerance

cm3/1000 strokes : + 10.0

Check tolerance : +- 15.0

LOW IDLE

Rack travel in mm : 6.00 Tolerance mm : + 0.10

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 25.07.97 Test oil : ISO 4113

Combination No. : 0 402 076 770

Injection pump

Pump designation : PES6P110A320LS3318

: -1

EP type number : 0 412 016 749

Governor

Governer design. : RSV350...750P4A561

: 0 421 833 451 Governer no.

Cust. part No. : 1823837092

Customer-spec. information : NAVISTAR Customer : DT-531 Motor Power KW : 224.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C 40 : +- 2.0 Tolerance °C

Overflow valve : 1 417 413 076

Inlet press. bar : 2.8 Tolerance bar : \leftarrow 0.1

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 : +- 1.5 Tolerance bar

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter : 3.0

x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : +- 1.0

Prestroke mm 3.00 : +- 0.05 Tolerance mm

Check

: + 0.10 tolerance mm

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance *NW : +- 0.75

BASIC SETTING

Rated speed rpm : 650

Rack travel in mm : 12.55

Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 225.5

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +- 3.0

Spreed	† Tolerance
·	cm3/1000 strokes : 4.0
Tolerance cm3/1000 strokes : 4.0	Check tolerance cm3/1000s. : 6.5
Chis/ rood strokes : 4.0	cm3/1000s. : 6.5
Check tolerance	+
cm3/1000s. : 6.5	CONTROL LEVER
	T CONTROL LEVER
	control lever
Rated speed rpm : 340	<pre>position degree : 97.0 tolerance degree : +- 4.0</pre>
Rack travel in mm: 5.20	tocceratice degree : 1- 4.0
Tolerance mm : + 0.10	+ RATED SPEED
Del. quantity cm3/1000 strokes : 35.0	+ rack travel mm : 10.20 + Rated speed rpm : 750
Tolerance	Tolerance 1/min : +- 5
cm3/1000 strokes : +- 2.0	+
Check tolerance cm3/1000s. : +- 4.5	+ rack travel mm : 4.00 + Rated speed rpm : 800
Spreed : +- 4.3	+ Tolerance 1/min : +- 5
Tolerance	+
cm3/1000 strokes : 8.0 Check tolerance	+ rack travel mm : 0.85 + Folerance mm : +- 0.55
cm3/1000s. : 12.0	+ Rated speed rpm : 900
	+
(D) CETTING OF THIS CTTON DUMP	+ rack travel mm : 4.00
(B) SETTING OF INJECTION PUMP	+ Rated speed rpm : 805 + Tolerance 1/min : +- 5
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	+
GUIDE SLEEVE POSITION	
	+ LOW IDLE
control lever	‡
position degree : - 3	control lever
Rated speed rpm : 800	position degree : 76.0
Rack travel in mm : 0.50	tolerance degree : +- 4.0
Tolerance mm : +- 0.20	Setting point w/out bumper spring
	D-4-4 400
governor spring	Rated speed rpm : 100
pre-tension click setting x : 4.00	Rated speed rpm : 100 CRT mm min. : > 19.00
pre-tension	CRT mm min. : > 19.00
pre-tension click setting x : 4.00	CRT mm min. : > 19.00 Testing:
pre-tension click setting x : 4.00 FULL LOAD DELIVERY AT FULL LOAD	CRT mm min. : > 19.00 Testing: Rated speed rpm : 340
pre-tension click setting x : 4.00 FULL LOAD DELIVERY AT FULL LOAD Rated speed rpm : 650	CRT mm min. : > 19.00 Testing: Rated speed rpm : 340 rack travel mm : 5.20
pre-tension click setting x : 4.00 FULL LOAD DELIVERY AT FULL LOAD Rated speed rpm : 650 Aneroid pressure	CRT mm min. : > 19.00 Testing: Rated speed rpm : 340
pre-tension click setting x : 4.00 FULL LOAD DELIVERY AT FULL LOAD Rated speed rpm : 650 Aneroid pressure hPa : - Del. quantity	CRT mm min. : > 19.00 Testing: Rated speed rpm : 340 rack travel mm : 5.20
pre-tension click setting x : 4.00 FULL LOAD DELIVERY AT FULL LOAD Rated speed rpm : 650 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 225.5	CRT mm min. :> 19.00 Testing: Rated speed rpm : 340 rack travel mm : 5.20 Tolerance mm : + 0.10 TORQUE CONTROL
pre-tension click setting x : 4.00 FULL LOAD DELIVERY AT FULL LOAD Rated speed rpm : 650 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 225.5 Tolerance	CRT mm min. : > 19.00 Testing: Rated speed rpm : 340 rack travel mm : 5.20 Tolerance mm : + 0.10 TORQUE CONTROL Rated speed rpm : 650
pre-tension click setting x : 4.00 FULL LOAD DELIVERY AT FULL LOAD Rated speed rpm : 650 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 225.5	CRT mm min. :> 19.00 Testing: Rated speed rpm : 340 rack travel mm : 5.20 Tolerance mm : + 0.10 TORQUE CONTROL
pre-tension click setting x : 4.00 FULL LOAD DELIVERY AT FULL LOAD Rated speed rpm : 650 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 225.5 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0	CRT mm min. : > 19.00 Testing: Rated speed rpm : 340 rack travel mm : 5.20 Tolerance mm : + 0.10 TORQUE CONTROL Rated speed rpm : 650 rack travel mm : 12.55
pre-tension click setting x : 4.00 FULL LOAD DELIVERY AT FULL LOAD Rated speed rpm : 650 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 225.5 Tolerance cm3/1000 strokes : + 1.0 Check tolerance	CRT mm min. : > 19.00 Testing: Rated speed rpm : 340 rack travel mm : 5.20 Tolerance mm : + 0.10 TORQUE CONTROL Rated speed rpm : 650 rack travel mm : 12.55

STARTING FUEL DELIVERY

Rated speed rpm 100 20.50 rack travel mm : + - 0.50Tolerance mm

Del. quantity cm3/1000 strokes : 145.0

Tolerance

cm3/1000 strokes : +- 20.0

Check tolerance

: +- 25.0 cm3/1000s.

LOW IDLE

Rated speed rpm : 340

Rack travel in mm : 5.20 : +- 0.10 Tolerance mm Del. quantity

cm3/1000 strokes : 35.0

Tolerance

cm3/1000 strokes : +- 2.0 Check tolerance

cm3/1000s.

: +- 4.5 Spreed

Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : ISO 4113 Test oil

: 17.07.97

Combination No. : 0 402 196 706

Injection pump

Pump designation : PES6P120A720RS3354

EP type number : 0 412 026 781

Governor

Governer design. : RE30

Governer no. : 0 421 890 029

Cust. part No. : RE 62643

Customer-spec. information Customer : DEERE : 6081AF001 Motor Power KW : 187.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

40 temp. °C Tolerance *C : + 2.0

Overflow valve : 2 417 413 077

Inlet press. bar : 2.0 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 bar Tolerance bar : +- 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x length mm : 600

REMARKS

Pump-specific values in Section (B) must be observed!

(A) INJECTION PUMP SETTINGS

No basic setting.

Setting of constant delivery

under Section C.

BEGINNING OF DELIVERY

Test pressure bar: 17.0 Tolerance bar : +- 1.0

: 1-5-3-6-2-Firing order

: 0-60-120-180-240 Phasing

: -300

Start of delivery blocking

*NW after s.o.d. : 8.00 Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Barrel no. : 1

Beginning of delivery differende

and maximum rack

Tolerance mm : + 050 Difference * CS : 2.50

(B) POSITIONER TESTING Warm-up time: 3 minutes at n=600 min-1, Uact = 2.5 V

+	For Test with control rod
TESTING & SETTING RACK TRAVEL SENSOR POSITION	in stop position
	Engine speed min-1: 60
Engine speed min-1: 0	Amplitude V : 1.4 Tolerance V : +/- 0.6
Setting point	- Check
(P, R and H pump)	tolerance V : +/- 1.20
Uact V : 3.100	Engine speed min-1: 600
CRT mm : 13.00 -	Difference
Tolerance mm : +/- 0.05	Amplitude to Amplitude V : max.1.4
tolerance mm : +/- 0.10	Amperedde V . max.1.4
Check value	
(P, R and H pump)	(C) INJECTION PUMP WITH POSITIONER
Uact V : 1.700 -	TEST POINT V1
CRT mm : 6.15	Rated speed rpm : 1100
Tolerance mm : +/- 0.25	- Uact V : 2.880
Check -	Del. quantity
tolerance mm : +/- 0.30 -	cm3/1000 strokes : 140.0
7	Tolerance : +- 1.0
Setting point	Check tolerance
(M pump)	cm3/1000s. : +- 4.0
an bambs	Spreed
Uact V : 3.100	Tolerance
CRT mm : 12.50	cm3/1000 strokes : 5.0
Tolerance mm : +/- 0.05 -	Check tolerance
Check tolerance mm : +/- 0.10	cm3/1000s. : 9.0 FUEL DELIVERY CHARACTERISTICS
7	-
Check value	
(dimuq M)	Rated speed rpm : 700
Uact V : 1.700 -	Uact V
Uact V : 1.700 - CRT mm : 5.50 -	Del. quantity cm3/1000 strokes : 141.5
Tolerance mm : +/- 0.25	Tolerance
Check	cm3/1000 strokes : + 3.0
tolerance mm : +/- 0.30 -	Check tolerance
gara marakakan	cm3/1000s. : + 6.0
Stop position	Spreed Tolerance
Uact V : Value with	tolerance cm3/1000 strokes : 8.0
deenergised adjusting magnet	Check tolerance
and control rod in	cm3/1000s. : 12.0
stop position.	+
CRT mm : 0.75	Parad and discount of the same
Tolerance mm : +/- 0.25 -	Rated speed rpm : 425
Check - tolerance mm : +/- 0.35 -	Uact V : 1.610 Del. quantity
totelative iiiii . T/= 0.55	cm3/1000 strokes : 22.0
4	Tolerance
ENGINE-SPEED SENSOR	cm3/1000 strokes : +- 3.0
(All P and R pumps not	Check tolerance
H and M pumps)	cm3/1000s. : +- 6.0
1	Spreed

Tolerance

cm3/1000 strokes : 6.0

Check tolerance

cm3/1000s. : 10.0

TEST POINT L1

Rated speed rpm : 425 Uact V : 1.610

Tolerance Volt : + 0.060

Check tolerance Volt : + 0.060

STARTING FUEL DELIVERY

Rated speed rpm : 100 Uact V : 4.600

Del. quantity

cm3/1000 strokes : 105.0

Tolerance

cm3/1000 strokes : + 10.0

Check tolerance

cm3/1000s. : + 13.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 17.07.97 : ISO 4113

Combination No. : 0 402 196 707

Injection pump

Pump designation : PES6P12OA72ORS3354

EP type number : 0 412 026 781

Governor

Governer design. : RE30

Governer no. : 0 421 890 029

Cust. part No. : RE 62645

Customer-spec. information Customer : DEERE
Motor : 6031HF
Power KW : 203.0

: 6031HF001 : 203.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 077

Inlet press. bar :

2.0

Tolerance bar : + 0.1

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

bar

208.5

Tolerance bar : + 1.5

Test Lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0

x length mm : 600

REMARKS

Pump-specific values in Section (B) must be observed!

(A) INJECTION PUMP SETTINGS No basic setting.

Setting of constant delivery

under Section C.

BEGINNING OF DELIVERY

Test pressure bar : 17.0

Firing order : 1-5-3-6-2-

: 4

Phasing

: 0-60-120-180-240

Start of delivery mark

*NW after s.o.d. : 9.00

Tolerance

: +- 0.50

Check

tolerance °NW : +- 0.75

Barrel no. : 1

Beginning of delivery differende

and maximum rack

travel : 15.00
Tolerance mm : +- 0.50

Difference * CS : 2.50

(B) POSITIONER TESTING Warm-up time: 3 minutes at n=600 min-1, Uact = 2.5 V

TESTING & SETTING RACK TRAVEL SENSOR

POSITION

	I Frains aread ris 1. 40
Engine speed min-1: 0	+ Engine speed min-1: 60 + Amplitude V : 1.4
-	+ Amplitude V : 1.4 + Tolerance V : +/- 0.6
Setting point	+ Check
(P, R and H pump)	tolerance V : +/- 1.20
Uact V : 3.100	T Engine speed min-1: 600
Uact V : 3.100 CRT mm : 13.00	+ Difference
Tolerance mm : +/- 0.05	+ Amplitude to
Check	+ Amplitude V : max.î.4
tolerance mm : +/- 0.10	‡
Check value	
(P, R and H pump)	(C) INJECTION PUMP WITH POSITIONER
	TEST POINT V1
Uact V : 1.700	1 1231 1 01(4) 11
CRT mm : 6.15	Pated speed rpm : 1100
Tolerance mm : +/- 0.25	+ Uact V : 2.880
Check	+ Del. quantity
tolerance mm : +/- 0.30	+ cm3/1000 strokes : 140.0
	+ Tolerance
	+ cm3/1000 strokes : +- 1.0
Setting point	+ Check tolerance
(M pump)	+ cm3/1000s. : +- 3.0
Uact V : 3.100	+ Spreed + Tolerance
Uact V : 3.100 CRT mm : 12.50 Tolerance mm : +/- 0.05	t cm3/1000 strokes : 5.0
Tolerance mm : +/- 0.05	Check tolerance
Check	+ cm3/1000s. : 9.0
tolerance mm : +/- 0.10	+ FUEL DELIVERY CHARACTERISTICS
	+
Check value	
(gmuq M)	Rated speed rpm : 700
4 700	+ Uact V : 2.880
Uact V : 1.700 CRT mm : 5.50	+ Del. quantity + cm3/1000 strokes : 141.5
Tolerance mm : +/- 0.25	Tolerance
Check	+ cm3/1000 strokes : +- 3.0
tolerance mm : +/- 0.30	+ Check tolerance
	+ cm3/1000s. : +- 6.0
Stop position	Spreed
	+ Tolerance
Uact V : Value with	+ cm3/1000 strokes : 8.0
deenergised adjusting magnet	+ Check tolerance
and control rod in	+ cm3/1000s. : 12.0
stop position. CRT mm : 0.75	Ī
CRT mm : 0.75 Tolerance mm : +/- 0.25	Rated speed rpm : 425
Check	+ Uact V : 1.610
W11 W M13	1 1010
	∔ Del. duantity
tolerance mm : +/- 0.35	<pre>+ Del. quantity + cm3/1000 strokes : 22.0</pre>
	cm3/1000 strokes : 22.0 Tolerance
tolerance mm : +/- 0.35 ENGINE-SPEED SENSOR	- cm3/1000 strokes : 22.0 - Tolerance - cm3/1000 strokes : +- 3.0
tolerance mm : +/- 0.35 ENGINE-SPEED SENSOR (All P and R pumps not	- cm3/1000 strokes : 22.0 - Tolerance - cm3/1000 strokes : +- 3.0 - Check tolerance
tolerance mm : +/- 0.35 ENGINE-SPEED SENSOR	cm3/1000 strokes : 22.0 Tolerance cm3/1000 strokes : +- 3.0 Check tolerance cm3/1000s. : +- 6.0
tolerance mm : +/- 0.35 ENGINE-SPEED SENSOR (All P and R pumps not H and M pumps)	- cm3/1000 strokes : 22.0 - Tolerance - cm3/1000 strokes : + 3.0 - Check tolerance - cm3/1000s. : + 6.0 - Spreed
tolerance mm : +/- 0.35 ENGINE-SPEED SENSOR (All P and R pumps not H and M pumps) Test with control rod	cm3/1000 strokes : 22.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance
tolerance mm : +/- 0.35 ENGINE-SPEED SENSOR (All P and R pumps not H and M pumps)	- cm3/1000 strokes : 22.0 - Tolerance - cm3/1000 strokes : +- 3.0 - Check tolerance - cm3/1000s. : +- 6.0 - Spreed

Check tolerance

: 10.0 cm3/1000s.

TEST POINT L1

: 425 Rated speed rpm 1.610 Uact V

Tolerance Volt

: + 0.060Check tolerance

: + 0.060Volt

STARTING FUEL DELIVERY

Rated speed rpm 100 Uact V 4.600

Del. quantity

cm3/1000 strokes : 105.0

Tolerance

cm3/1000 strokes : +- 10.0

Check tolerance

: +- 13.0 cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 17.07.97 Test oil : ISO 4113

Combination No. : 0 402 196 708

Injection pump

Pump designation : PES6P120A720RS3362

EP type number : 0 412 026 787

Governor

Governer design. : RE30

Governer no. : 0 421 890 029

Cust. part No. : RE 64860

Customer-spec. information
Customer : DEERE
Motor : 6076ADW31
Power KW : 140.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C : 40 Tolerance °C : + 2.0

Overflow valve : 2 417 413 077

Inlet press. bar : 2.0 Tolerance bar : +- 0.1

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter : 3.0
x length mm : 600

REMARKS

Pump-specific values in Section (B) must be observed!

(A) INJECTION PUMP SETTINGS No basic setting.

Setting of constant delivery

under Section C.

BEGINNING OF DELIVERY

Test pressure bar : 17.0

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Start of delivery mark

*NW after s.o.d.: 7.75 Tolerance: + 0.50

Check

tolerance *NW : + 0.75

Barrel no. : 1

Beginning of delivery differende

and maximum rack

travel : 15.00
Tolerance mm : + 0.50
Difference CS : 3.25

(B) POSITIONER TESTING Warm-up time: 3 minutes at n=600 min-1, Uact = 2.5 V

TESTING & SETTING RACK TRAVEL SENSOR

POSITION

	+ Engine speed min-1: 60
Engine speed min-1: 0	Amplitude V : 1.4 Tolerance V : +/- 0.6
·	
Setting point	+ Check
(P, R and H pump)	† tolerance V : +/- 1.20
Unit 14	
Uact V : 3.100 CRT mm : 13.00	+ Engine speed min-1: 600 + Difference
Tolerance mm : +/- 0.05	+ Amplitude to
Check	Amplitude V : max.1.4
tolerance mm : +/- 0.10	Timperedoc V . max.1.4
	1
Check value	
(P, R and H pump)	(C) INJECTION PUMP WITH POSITIONER
	+
4 700	+ TEST POINT V1
Uact V : 1.700 CRT mm : 6.15	1100
CRT mm : 6.15 Tolerance mm : +/- 0.25	Rated speed rpm : 1100
	+ Uact V : 2.800 + Del. quantity
Check tolerance mm : +/- 0.30	+ cm3/1000 strokes : 139.0
taterance man . The U.Su	Tolerance
	+ cm3/1000 strokes : +- 1.0
Setting point	+ Check tolerance
(M) (Amuq M)	+ cm3/1000s. : +- 4.0
and the second of	Spreed
Uact V : 3.100 CRT mm : 12.50	+ Tolerance
CRT mm : 12.50	+ cm3/1000 strokes : 5.0
Tolerance mm : +/- 0.05	- Check tolerance
Check	+ cm3/1000s. : 9.0
tolerance mm : +/- 0.10	+ FUEL DELIVERY CHARACTERISTICS
Ob. 1 and	†
Check value	+ Rated speed rpm : 700
(M pump)	+ Rated speed rpm : 700 + Uact V : 2.800
Uact V : 1.700 CRT mm : 5.50	Del. quantity
CRT mm : 5.50	cm3/1000 strokes : 141.0
Tolerance mm : +/- 0.25	Tolerance
Check	- cm3/1000 strokes : +- 3.0
tolerance mm : +/- 0.30	+ Check tolerance
	+ cm3/1000s. : +- 6.0
Stop position	+ Spreed
and the second s	+ Tolerance
Uact V : Value with	+ cm3/1000 strokes : 8.0
deenergised adjusting magnet	+ Check tolerance + cm3/1000s. : 12.0
and control rod in stop position.	+ cm3/1000s. : 12.0
CRT mm : 0.75	
Tolerance mm : +/- 0.25	Rated speed rpm : 425
Check	+ Uact V : 1.580
tolerance mm : +/- 0.35	Del. quantity
The grade material states of the state of th	+ cm3/1000 strokes : 22.5
	+ Tolerance
ENGINE-SPEED SENSOR	- cm3/1000 strokes : + 3.0
(ALL P and R pumps not	+ Check tolerance
H and M pumps)	+ cm3/1000s. : +- 6.0
	Spreed
Test with control rod	+ Tolerance
in stop position	+ cm3/1000 strokes : 6.0
	

Check tolerance

cm3/1000s. : 10.0

TEST POINT L1

Rated speed rpm : 425 Uact V : 1.580

Tolerance Volt : +- 0.060

Check tolerance

Volt : ← 0.060

STARTING FUEL DELIVERY

Rated speed rpm : 100 Uact V : 4.600

Del. quantity

cm3/1000 strokes : 105.0

Tolerance

cm3/1000 strokes : +- 10.0

Check tolerance

cm3/1000s. : + 13.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 25.07.97 : ISO 4113

Combination No. : 0 402 776 815

Injection pump

Pump designation : PES6P120A720RS7255

EP type number : 0 412 726 881

Governor

Governer design. : RSV400...900P7A569

Governer no. : 0 421 833 418

Cust. part No. : RE42226

Customer-spec. information

Customer : DEERE

Motor : 6101 AF010 Power KW : 285.0

TEST BENCH REQUIREMENTS

Test oil inlet

: 40 temp. °C Tolerance *C : + 2.0

Overflow valve : 2 417 413 079

Inlet press. bar : 1.5

Overflow quantity

min. l/h : 145 Tolerance l/h : +- 5.0

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

bar

: 208.5

Tolerance bar : +- 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 17.0

Tolerance bar : +- 1.0

Prestroke mm : 3.60Tolerance mm : \div 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50

Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

: 0-50-120-180-240 Phasing

: -300

Tolerance : +- 0.50

Check

tolerance $^{\circ}NW$: + 0.75

Start of delivery mark

*NW after s.o.d. : 8.50

Tolerance : \leftarrow 0.50

Check

tolerance *NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 850

Rack travel in mm: 14.75

Tolerance mm : +- 0.05

F23

Rack travel in mm: 5.00 Tolerance mm : + 0.10 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION control lever position degree : - 3
Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 5.00CONTROL LEVER control lever position degree : 106.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 14.10
Rated speed rpm : 900
Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 940 4.00 Tolerance 1/min : + 5 rack travel mm : 0.85
Tolerance mm : + 0.55
Rated speed rpm : 1050 rack travel mm : 4.00 Rated speed rpm : 980 Tolerance 1/min : + 15 LOW IDLE control lever

Rated speed rpm : 400 rack travel mm : 5.50 Tolerance mm : +- 0.10 Rated speed rpm : 100 CRT mm min. : > 19.00 Testing: Rated speed rpm : 400 rack travel mm : 5.00 Tolerance mm : +- 0.10 TORQUE CONTROL Rated speed rpm : 850 rack travel mm : 14.75 Tolerance mm : + 0.05 Start interlock Rated speed rpm : > 100 Check speed 1/min : > 80 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : + 0.50 Del. quantity cm3/1000 strokes : 105.0 Tolerance cm3/1000 strokes : +- 20.0Check tolerance cm3/1000s. : +- 25.0 LOW IDLE Rack travel in mm : 5.00 Tolerance mm : \leftarrow 0.10

Setting point w/out bumper spring

position degree : 80.0 tolerance degree : +- 4.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 25.07.97 : ISO 4113

Combination No. : 0 402 776 816

Injection pump

Pump designation : PES6P12OA72ORS7255

EP type number : 0 412 726 881

Governor

Governer design. : RSV400...1050POA547

: -4

Governer no. : 0 421 833 419

Cust. part No. : RE46178

Customer-spec. information

Customer : DEERE

Motor

: 6101 HF010

Power KW : 280.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 079

Inlet press. bar : 1.5

Overflow quantity

min. L/h : 145 Tolerance L/h : +- 5.0

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

F26

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter :

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar: 17.0 Tolerance bar : +- 1.0

Prestroke mm : 3.60 Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tclerance °NW : +- 0.75

Start of delivery mark

*NW after s.o.d. : 8.75 Tolerance : + 0.50

Check

tolerance °NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm: 13.65

Tolerance mm : +- 0.05

+	Check tolerance
Del. quantity cm3/1000 strokes : 259.5	cm3/1000s. : 9.0
Tolerance cm3/1000 strokes : + 1.0	CONTROL LEVER
Check tolerance cm3/1000s. : + 4.0	<pre>control lever position degree : 97.0 tolerance degree : +- 4.0</pre>
Spreed	RATED SPEED
Tolerance cm3/1000 strokes : 5.0	rack travel mm : 12.60 Rated speed rpm : 1100 Tolerance 1/min : +- 5
Check tolerance cm3/1000s. : 9.0	rack travel mm : 4.00 Rated speed rpm : 1160 Tolerance 1/min : +- 5
Rack travel in mm: 5.30 Tolerance mm: : + 0.10	rack travel mm : 0.85 Tolerance mm : +- 0.55 Rated speed rpm : 1250
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	rack travel mm : 4.00 Rated speed rpm : 1170 Tolerance 1/min : +- 15
GUIDE SLEEVE POSITION	LOW IDLE
control lever position degree : - 3 Rated speed rpm : 800	control lever position degree : 72.0 tolerance degree : +- 4.0
Rack travel in mm: 0.50 Tolerance mm: + 0.20	Setting point w/out bumper spring
governor spring	Rated speed rpm : 400
pre-tension + click setting x : 3.50	rack travel mm : 5.80 Tolerance mm : +- 0.10
	Rated speed rpm : 100
FULL LOAD DELIVERY AT FULL LOAD STOP	
Rated speed rpm : 1050	CRT mm min. : > 19.00
Aneroid pressure hPa : 1700	Testing:
Del. quantity	Rated speed rpm : 400
cm3/1000 strokes : 259.5	rack travel mm : 5.30 Tolerance mm : +- 0.10
cm3/1000 strokes : + 1.0	
Check tolerance cm3/1000s. : + 4.0 Spreed	TORQUE CONTROL Rated speed rpm : 1050
Tolerance + cm3/1000 strokes : 5.0 +	rack travel mm : 13.65 Tolerance mm : +- 0.05
1	Total and the control of the control

Rated speed rpm : 850 rack travel mm : 14.00 Tolerance mm : + 0.10

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 1700
rack travel mm : 14.00
Tolerance mm : +- 0.10

Rated speed rpm : 500
Pressure hPa : rack travel mm : 11.80
Tolerance mm : +- 0.10

MEASUREMENT

Rated speed rpm : 500

Pressure hPa : 1345 rack travel mm : 13.05 Tolerance mm : +- 0.05

Pressure hPa : 1090 rack travel mm : 12.00 Tolerance mm : + 0.20

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure hPa : 1700 Rated speed rpm : 850

Del. quantity

cm3/1000 strokes : 276.0

Tolerance

cm3/1000 strokes : +- 3.0

Check tolerance

cm3/1000s. : +- 6.0

Aneroid pressure

hPa : -Rated speed rpm : 500

Del. quantity

cm3/1000 strokes : 196.0

Tolerance

cm3/1000 strokes : +- 2.0 Check tolerance

cm3/1000s. : + 4.0

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : +- 0.50 Del. quantity

cm3/1000 strokes : 105.0

Tolerance

cm3/1000 strokes : + 20.0

Check tolerance

cm3/1000s. : +- 25.0

LOW IDLE

Rack travel in mm : 5.30Tolerance mm : + 0.10

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 25.07.97 Test oil : ISO 4113

Combination No. : 0 402 796 813

Injection pump

Pump designation : PES6P12OA72ORS7356 EP type number : 0 412 726 919

Governor

Governer design. : RE30

Governer no. : 0 421 890 017

Cust. part No. : RE 61658

Customer—spec. information Customer : DEERE

Customer : DEERE : 6081 HF001

Power KW : 205.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. $^{\circ}$ C : 40 Tolerance $^{\circ}$ C : \leftarrow 2.0

Overflow valve : 2 417 413 077

Inlet press. bar : 2.0 Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 103

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0
x length mm : 600

REMARKS

Pump-specific values in Section (B) must be observed!

(A) INJECTION PUMP SETTINGS

No basic setting.

Setting of constant delivery

under Section C.

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm : 3.60
Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance °NW : + 0.75

Start of delivery blocking

*NW after s.o.d. : 9.75

Tolerance : + 0.50 Check

neck

tolerance $^{\circ}NW$: \leftarrow 0.75

Barrel no. : 1

(B) POSITIONER TESTING Warm-up time: 3 minutes at n=600 min-1, Uact = 2.5 VTESTING & SETTING RACK TRAVEL SENSOR POSITION Engine speed min-1: Setting point (P, R and H pump) 3.100 Uact V 13.00 CRT mm : +/- 0.05 Tolerance mm Check : +/- 0.10tolerance mm Check value (P, R and H pump) 1.700 Uact V 6.15 CRT mm Tolerance mm : +/- 0.25 Check : +/- 0.30tolerance mm Setting point (amuq M) 3.100 Uact V 12.50 CRT mm : +/- 0.05 Tolerance mm Check tolerance mm : +/- 0.10 Check value (M pump) 1.700 Uact V 5.50 CRT mm : +/- 0.25 Tolerance mm Check : +/- 0.30tolerance mm Stop position Uact V : Value with deenergised adjusting magnet and control rod in stop position. 0.75 CRT mm Tolerance mm : +/- 0.25 Check

: +/- 0.35

ENGINE-SPEED SENSOR (All P and R pumps not H and M pumps) Test with control rod in stop position Engine speed min-1: 60 Amplitude V 1.4 Tolerance V : +/- 0.6 Check : +/- 1.20 tolerance V Engine speed min-1: 600 Difference Amplitude to Amplitude V : max.1.4 (C) INJECTION PUMP WITH POSITIONER TEST POINT V1 Rated speed rpm 1050 Uact V 3.030 Del. quantity cm3/1000 strokes : 213.0 Tolerance cm3/1000 strokes : +-Check tolerance cm3/1000s.4.0 Spreed Tolerance 5.0 cm3/1000 strokes : Check tolerance cm3/1000s.FUEL DELIVERY CHARACTERISTICS 700 Rated speed rpm Uact V 3.120 Del. quantity cm3/1000 strokes : 237.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s.6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. 12.0

TEST POINT L1

Uact V

Rated speed rpm

450

1.740

tolerance mm

Tolerance Volt : +- 0.060 Check tolerance Volt : + 0.060Del. quantity cm3/1000 strokes : 26.0 Tolerance cm3/1000 strokes : +-3.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s.10.0

STARTING FUEL DELIVERY

Rated speed rpm : 100
Uact V : 4.550
Del. quantity
cm3/1000 strokes : 120.0
Tolerance
cm3/1000 strokes : + 20.0
Check tolerance
cm3/1000s. : + 25.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 25.07.97

Test oil

: ISO 4113

Combination No. : 0 402 796 819

Injection pump

Pump designation : PES6P120A720RS7407

EP type number : 0 412 726 955

Governor

Governer design. : RE30

Governer no.

: 0 421 890 037

Cust. part No. : RE 65679

Customer-spec. information

Customer : DEERE

Motor

: 6101HRW10

Power KW

: 266.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C

Tolerance °C

: +- 2.0

Overflow valve

: 2 417 413 077

Inlet press. bar :

2.0

Tolerance bar

: +- 0.1

Test nozzle holde

assembly

: 1 688 901 103

Opening pressure

208.5

Tolerance bar

Test Lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0

x length mm : 600

REMARKS

Pump-specific values

in Section (B)

must be observed!

(A) INJECTION PUMP SETTINGS

No basic setting.

Setting of constant delivery

under Section C.

BEGINNING OF DELIVERY

Test pressure bar: 17.0

Tolerance bar : + 1.0

: +- 0.05 3.60 Prestroke mm

Tolerance mm Check

: +- 0.10 tolerance mm

Rack travel in mm: 10.50

Tolerance mm : +- 0.50

: 1-5-3-6-2-Firing order

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance *NW : + 0.75

Start of delivery blocking

*NW after s.o.d. : 9.25

Tolerance

: + - 0.50

Check

tolerance *NW

: +- 0.75

Barrel no.

: 1

Beginning of delivery differende

and maximum rack

travel

: 15.00

GO4

Difference * CS : 3.75 (B) POSITIONER TESTING Warm-up time: 3 minutes at n=600 min-1, Uact = 2.5 VTESTING & SETTING RACK TRAVEL SENSOR **POSITION** Engine speed min-1: Setting point (P, R and H pump) Uact V : 3.100 13.00 CRT mm Tolerance mm : +/- 0.05 Check tolerance mm : +/- 0.10 Check value (P, R and H pump) 1.700 Uact V 6.15 CRT mm : +/- 0.25 Tolerance mm Check tolerance mm : +/- 0.30 Setting point (amua M) 3,100 Uact V : CRT mm 12.50 : +/- 0.05 Tolerance mm Check : +/- 0.10tolerance mm Check value (amua M) 1,700 Uact V 5.50 CRT mm : +/- 0.25 Tolerance mm Check tolerance mm : +/- 0.30 Stop position : Value with Uact V deenergised adjusting magnet and control rod in stop position.

0.75

Check : +/- 0.35tolerance mm ENGINE-SPEED SENSOR (All P and R pumps not H and M pumps) Test with control rod in stop position Engine speed min-1: 60 Amplitude V 1.4 Tolerance V : +/- 0.6 Check : +/- 1.20 tolerance V Engine speed min-1: 600 Difference Amplitude to Amplitude V : max.1.4 (C) INJECTION PUMP WITH POSITIONER TEST POINT V1 1050 Rated speed rom Uact V 3.030 Del. quantity cm3/1000 strokes : 213.0 Tolerance cm3/1000 strokes : +-Check tolerance cm3/1000s. 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance 9.0 cm3/1000s.FUEL DELIVERY CHARACTERISTICS Rated speed rpm 700 3.120 Uact V Del. quantity cm3/1000 strokes : 237.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. 12.0 TEST POINT L1

Tolerance mm

: +/- 0.25

CRT mm

450 Rated speed rpm 1.740 Uact V Tolerance Volt : +- 0.060 Check tolerance : + 0.060Volt Del. quantity cm3/1000 strokes : 26.0 Tolerance cm3/1000 strokes : +-3.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s.10.0

STARTING FUEL DELIVERY

Rated speed rpm : 100
Uact V : 4.550
Del. quantity
cm3/1000 strokes : 120.0
Tolerance
cm3/1000 strokes : + 20.0
Check tolerance
cm3/1000s. : + 25.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 04,07,96 Edition : ISO 4113 Test oil

Combination No. : 0 402 646 650

Injection pump

Pump designation : PE6P130A720RS7354 EP type number : 0 412 636 835

Governor

Governer design. : RQV300...950PA1002

: -2K

: D 421 815 434 Governer no.

Cust. part No. :

Customer-spec. information

Customer : IVECO-FRANCE : 8210.42.4000 Motor

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

40 temp. °C Tolerance °C 2.0

Overflow valve : 2 417 413 076

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

bar 208.5 Tolerance bar : **←** 1.5

Test Lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +- 1.0

: 5.05 Prestroke mm : +- 0.05 Tolerance mm Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 13.00 Tolerance mm : \leftarrow 0.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.50

Check

tolerance °NW : + 0.75

Start of delivery mark

tolerance °NW : +- 0.40

: 1 Barrel no.

BASIC SETTING

Rated speed rpm : 950

Rack travel in mm : 13.20 : +- 0.05 Tolerance mm

Del. quantity

cm3/1000 strokes : 274.0

Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0	guide sleeve travel mm : 13.50 Tolerance mm : +- 0.50
Spreed	GUIDE SLEEVE POSITION
	+
Tolerance cm3/1000 strokes : 5.0	control lever position degree : - 1 Rated speed rpm : 1185
Check tolerance : 9.0	Rack travel in mm : 12.00 Tolerance mm : +- 1.30
Rated speed rpm : 275	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm: 5.40 Tolerance mm: +- 0.10 Del. quantity	Rated speed rpm : 950 Aneroid pressure hPa : 900
cm3/1000 strokes : 35.0 Tolerance cm3/1000 strokes : +- 3.0	<pre>Del. quantity cm3/1000 strokes : 274.0 Tolerance</pre>
Check tolerance cm3/1000s. : +- 6.0	cm3/1000 strokes : + 1.0 Check tolerance
Spreed Tolerance cm3/1000 strokes : 8.0	+ cm3/1000s. : + 4.0 + Spreed + Tolerance
Check tolerance cm3/1000s. : 12.0	cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	CONTROL LEVER
GUIDE SLEEVE TRAVEL	control lever position degree : 114.0
Rated speed rpm : 1007 guide sleeve	tolerance degree : + 4.0
travel mm : 8.73 Tolerance mm : + 0.15	RATED SPEED : 12.10 : 295
Rated speed rpm : 300 guide sleeve	+ Rated speed rpm : 995 + Tolerance 1/min : + 5 + Check
travel mm : 1.64 Tolerance mm : +- 0.20	+ speed 1/min : +- 10
Rated speed rpm : 756 guide sleeve	+ rack travel mm : 4.00 + Rated speed rpm : 1110 + Tolerance 1/min : + 15
travel mm : 6.16 Tolerance mm : +- 0.25	Check speed 1/min : + 20
Rated speed rpm : 500 guide sleeve	rack travel mm : 0.50 Tolerance mm : + 0.50
travel mm : 3.78 Tolerance mm : +- 0.25	Rated speed rpm : 1300
Rated speed rpm : 1340	Į

LOW IDLE		+ Pressure hPa - rack travel mm + Tolerance mm
control lever position degree tolerance degree	: 69.0 : + 4.0	Start interloc Rated speed rp
Testing:		Check
Rated speed rpm rack travel mm Tolerance mm	: 275 : 5.40 : + 0.10	speed 1/min Check speed 1/min
Rated speed rpm	: 375	FUEL DELIVERY
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 13.20	Aneroid pressur hPa Rated speed rpi Del. quantity
Rated speed rpm rack travel mm Tolerance mm	: 700 : 12.75 : ← 0.10	cm3/1000 stroke Tolerance cm3/1000 stroke Check tolerance
Rated speed rpm rack travel mm Tolerance mm	: 12.05	cm3/1000s.
Rated speed rpm rack travel mm Tolerance mm	: 300 : 11.80 : + 0.30	Aneroid pressur hPa Rated speed rpr Del. quantity cm3/1000 stroke Tolerance
ANEROID/ALTITUDE COMPENSATOR TEST		cm3/1000 stroke Check tolerance cm3/1000s.
SETTING		†
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 950 : 900 : 13.20 : ← 0.05	Rated speed rpr Del. quantity cm3/1000 stroke
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 950 : - : 8.30 : +- 0.40	Tolerance cm3/1000 stroke cm3/1000 stroke cm3/1000s.
MEASUREMENT		<u> </u>
Rated speed rpm	: 950	LOW IDLE
Pressure hPa rack travel mm Tolerance mm	: 320 : 9.85 : + 0.20	Rated speed rpm

Pressure hPa rack travel mm Tolerance mm	: 610 : 12.10 : +- 0.05
Start interlock	
Rated speed rpm Rated speed rpm	: > 180 : < 220
Check speed 1/min Check	: > 160
speed 1/min	: < 240
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity	: 900 : 550
cm3/1000 strokes Tolerance	: 286.0
cm3/1000 strokes Check tolerance	: +- 3.0
cm3/1000s.	: +- 6.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: - : 550 : 173.0 : + 1.0 : + 4.0
STARTING FUEL DEL	IVERY
Rated speed rpm Del. quantity	: 100
cm3/1000 strokes Tolerance	: 155.0
cm3/1000 strokes Check tolerance	: +- 15.0
cm3/1000s.	: +- 19.0
LOW IDLE	
Rated speed rpm	: 275
Rack travel in mm	: 5.40

Tolerance mm Del. quantity	: +-	0.10
cm3/1000 strokes	:	35.0
Tolerance cm3/1000 strokes	: +-	3.0
Check tolerance cm3/1000s. Spreed	: +	6.0
Tolerance		۰ ۵
cm3/1000 strokes Check tolerance	;	8.0
cm3/1000s.	:	12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 30.07.97

Test oil

: ISO 4113

Combination No. : 0 402 746 608

Injection pump

Pump designation : PES6P120A320RS7359

EP type number : 0 412 726 925

Governor

Governer design. : RQ275/1050PA1275

Governer no. : 0 421 801 805

Cust. part No. : CCEP 5157A 66-222

Customer-spec. information

Customer : RENAULT V.I.

Motor

: MIDRO62045 F/C41

Power KW

: 152.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Overflow valve : 2 417 413 078

Test oil inlet

temp. °C

40

Tolerance °C

: +- 2.0

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Overflow quantity

min. l/h : 220 Tolerance l/h : +- 10.0

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

: 208.5

Tolerance bar : \leftarrow 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter :

2.0

x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar :

Tolerance bar : +- 1.0

Prestroke mm : 4.70 Tolerance mm : + 0.05

Check

tolerance mm : ← 0.10

Rack travel in mm : 20.25

Tolerance mm : \leftarrow 0.75

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

: **←** 0.50 Tolerance

Check

tolerance *NW : +- 0.75

Start of delivery mark

*NW after s.o.d. : -0.95

Tolerance : \leftarrow 0.50

Check

tolerance "NW : + 0.75

Barrel no. : 1

CRT ZERO POSITION

Rack travel in mm : 11.70	- Rated speed rpm : 1050
Tolerance mm : +- 0.05	- guide sleeve
	- travel mm : 6.70 - Tolerance mm : +- 0.10
BASIC SETTING	-
Rated speed rpm : 1050	- Rated speed rpm : 648 - guide sleeve
Rated Speed (pill : 1050	- travel mm : 6.18
Del. quantity cm3/1000 strokes : 176.0	- Tolerance mm : + 0.10
Talaana	Rated speed rpm : 375
Tolerance cm3/1000 strokes : +- 1.0	- guide sleeve - travel mm : 5.00
	- Tolerance mm : +- 0.10
Check tolerance cm3/1000s. : +- 4.0	- Rated speed rpm : 450
Spreed	- guide sleeve - travel mm : 6.00
+	- Tolerance mm : + 0.10
Tolerance	•
cm3/1000 strokes : 5.0	- Rated speed rpm : 1300 - guide sleeve
Check tolerance	- guide steeve - travel mm : 11.50
cm3/1000s. : 9.0	- Tolerance mm : + 0.50
1	- Rated speed rpm : 873 - guide sleeve
Rated speed rpm : 275	travel mm : 6.52
	- Tolerance mm : + 0.10
Rack travel in mm: -6.10	-
Tolerance mm : \leftarrow 0.10	GITDE SLEEVE POSITION
	GUIDE SLEEVE POSITION
Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 28.0 Tolerance	•
Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 28.0 Tolerance cm3/1000 strokes : + 2.0	- - control lever
Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 28.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance	- - control lever - position degree : 109
Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 28.0 Tolerance cm3/1000 strokes : + 2.0	control lever position degree : 109 Rated speed rpm : 500
Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 28.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance	control lever position degree : 109 Rated speed rpm : 500 Rack travel in mm : 20.00
Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 28.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 8.0	control lever position degree : 109 Rated speed rpm : 500
Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 28.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance	control lever position degree : 109 Rated speed rpm : 500 Rack travel in mm : 20.00
Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 28.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance	control lever position degree : 109 Rated speed rpm : 500 Rack travel in mm : 20.00
Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 28.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 12.0 (B) SETTING OF INJECTION PUMP	control lever position degree : 109 Rated speed rpm : 500 Rack travel in mm : 20.00 Tolerance mm : + 0.80 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1050
Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 28.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 12.0	control lever position degree : 109 Rated speed rpm : 500 Rack travel in mm : 20.00 Tolerance mm : + 0.80 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1050 Aneroid pressure
Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 28.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 12.0 (B) SETTING OF INJECTION PUMP	control lever position degree : 109 Rated speed rpm : 500 Rack travel in mm : 20.00 Tolerance mm : + 0.80 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1050 Aneroid pressure hPa : 1000 Del. quantity
Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 28.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 12.0 (B) SETTING OF INJECTION PUMP	control lever position degree : 109 Rated speed rpm : 500 Rack travel in mm : 20.00 Tolerance mm : + 0.80 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1050 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 176.0
Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 28.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1122	control lever position degree : 109 Rated speed rpm : 500 Rack travel in mm : 20.00 Tolerance mm : + 0.80 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1050 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 176.0 Tolerance cm3/1000 strokes : + 1.0
Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 28.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Reted speed rpm : 1122 guide sleeve	control lever position degree : 109 Rated speed rpm : 500 Rack travel in mm : 20.00 Tolerance mm : + 0.80 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1050 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 176.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance
Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 28.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1122	control lever position degree : 109 Rated speed rpm : 500 Rack travel in mm : 20.00 Tolerance mm : + 0.80 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1050 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 176.0 Tolerance cm3/1000 strokes : + 1.0
Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 28.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1122 guide sleeve travel mm : 7.06 Tolerance mm : + 0.15	control lever position degree : 109 Rated speed rpm : 500 Rack travel in mm : 20.00 Tolerance mm : + 0.80 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1050 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 176.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance
Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 28.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1122 guide sleeve travel mm : 7.06 Tolerance mm : + 0.15 Rated speed rpm : 275	control lever position degree : 109 Rated speed rpm : 500 Rack travel in mm : 20.00 Tolerance mm : + 0.80 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1050 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 176.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0
Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 28.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1122 guide sleeve travel mm : 7.06 Tolerance mm : + 0.15	control lever position degree : 109 Rated speed rpm : 500 Rack travel in mm : 20.00 Tolerance mm : + 0.80 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1050 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 176.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance

CONTROL LEVER

control lever

position degree : 276.0 tolerance degree : +- 4.0

RATED SPEED

rack travel mm : -1.00 Rated speed rpm : 1115 Tolerance 1/min : + 5

rack travel mm : -7.70
Rated speed rpm : 1205
Tolerance 1/min : + 15

rack travel mm : -11.20 Tolerance mm : +- 0.50 Rated speed rpm : 1350

LOW IDLE

control lever

position degree : 256.0 tolerance degree : +- 4.0

Setting point w/out bumper spring

Rated speed rpm : 200

CRT mm min. : < -4.20

Testing:

Rated speed rpm : 275
rack travel mm : -6.10
Tolerance mm : +- 0.10

rack travel mm : -9.70 Rated speed rpm : 365 Tolerance 1/min : + 20

TORQUE CONTROL

Rated speed rpm : 1050

Rated speed rpm : 600 rack travel mm : 1.00 Tolerance mm : +- 0.10

Rated speed rpm : 800 rack travel mm : 0.80 Tolerance mm : + 0.20

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 1000
rack travel mm : 1.00
Tolerance mm : +- 0.10

Rated speed rpm : 500
Pressure hPa : rack travel mm : -0.75
Tolerance mm : +- 0.20

MEASUREMENT

Rated speed rpm : 500

Pressure hPa : 280 rack travel mm : 0.65 Tolerance mm : +- 0.15

Pressure hPa : 160 rack travel mm : -0.15 Tolerance mm : + 0.05

Start interlock

Rated speed rpm : > 100 Rated speed rpm : < 195

Check

speed 1/min : > 80
Check
speed 1/min : < 215</pre>

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : 1000 Rated speed rpm : 600

Del. quantity cm3/1000 strokes : 193.0

Tolerance cm3/1000 strokes : +- 3.0

Check tolerance

cm3/1000s. : +- 6.0

Aneroid pressure

hPa : -Rated speed rpm : 500 Del. quantity
cm3/1000 strokes : 149.0
Tolerance
cm3/1000 strokes : +- 1.0
Check tolerance
cm3/1000s. : +- 4.0

STARTING FUEL DELIVERY

Rated speed rpm : 100
Del. quantity
cm3/1000 strokes : 155.0
Tolerance
cm3/1000 strokes : +- 15.0
Check tolerance
cm3/1000s. : +- 19.0

LOW IDLE

Rated speed rpm : 275 Rack travel in mm : -6.10 Tolerance mm : + - 0.10Del. quantity cm3/1000 strokes : 28.0 Tolerance cm3/1000 strokes : +-2.0 Check tolerance 5.0 cm3/1000s. Spreed Tolerance 8.0 cm3/1000 strokes : Check tolerance cm3/1000s. 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 13.08.97 Test oil : ISO 4113

Combination No. : F 000 409 888

Injection pump

Pump designation : PES6A80D320RS1271 EP type number : 9 400 083 058

Governor

Governer design. : RSV350...1400A2C2179

: R

Governer no. : 9 420 083 281

Cust. part No. :

Customer—spec. information Customer : MWM Motor : D229-6 Power KW : 100.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40 Tolerance °C : + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : + 1.5

Test lines : 1 680 750 003

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 2.25 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance °NW : + 0.75

Beginning of delivery differende

and maximum rack

travel : 10.50
Tolerance mm : + 1.50
Difference ° CS : 4.50

BASIC SETTING

Rated speed rpm : 1400

Rack travel in mm : 10.25 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes: 61.0

Tolerance +	Tolerance
cm3/1000 strokes : +- 0.5 +	cm3/1000 strokes : +- 0.5
<u> </u>	Check tolerance
Check tolerance	cm3/1000s. : +- 2.0
cm3/1000s. : $+$ 2.0 $+$	Spreed
<u> </u>	Tolerance
Spreed	cm3/1000 strokes : 2.5
·	Check tolerance
Tolerance +	cm3/1000s. : 4.0
cm3/1000 strokes : 2.5	
<u></u> _ }	
Check tolerance	
cm3/1000s. : 4.0	CONTROL LEVER
<u></u> }	
	control lever
}	position degree : 90.0
Rated speed rpm : 400	tolerance degree : +- 4.0
<u> </u>	•
Rack travel in mm: 7.20	RATED SPEED
Tolerance mm : + 0.10	rack travel mm : 9.20
Del. quantity	Rated speed rpm : 1435
cm3/1000 strokes : 12.5	Tolerance 1/min : +- 5
Tolerance	
cm3/1000 strokes : + 1.5	rack travel mm : 4.00
Check tolerance +	Rated speed rpm : 1510
cm3/1000s. : +- 3.5	Tolerance 1/min : +- 15
Spreed	
Tolerance	rack travel mm : 0.85
cm3/1000 strokes : 4.0	Tolerance mm : $+$ 0.55
Check tolerance	Rated speed rpm : 1650
cm3/1000s. : 6.0	, ,
<u> </u>	
\	
(B) SETTING OF INJECTION PUMP	
WITH GOVERNOR +	LOW IDLE
+	
+	
	control lever
GUIDE SLEEVE POSITION +	position degree : 63.0
+	tolerance degree : +- 4.0
+	_
control lever	Setting point w/out bumper spring
position degree : - 3	· -
Rated speed rpm : 800 +	Rated speed rpm : 400
+	rack travel mm : 6.70
Rack travel in mm: 0.65	Tolerance mm : +- 0.10
Tolerance mm : +- 0.35 +	
+	Rated speed rpm : 100
governor spring +	•
pre-tension +	CRT mm min. : > 19.00
click setting x : 4.00	
1	Testing:
	-
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 400
FULL LOAD DELIVERY AT FULL LOAD STOP	rack travel mm : 7.20
+	
Rated speed rpm : 1400	rack travel mm : 7.20
+	rack travel mm : 7.20
Rated speed rpm : 1400 + Aneroid pressure hPa : -	rack travel mm : 7.20 Tolerance mm : + 0.10 rack travel mm : 2.00
Rated speed rpm : 1400 + Aneroid pressure	rack travel mm : 7.20 Tolerance mm : + 0.10 rack travel mm : 2.00

TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 1400 : 10.25 : +- 0.05	
Rated speed rpm rack travel mm Tolerance mm	: 500 : 10.75 : ← 0.05	
Rated speed rpm rack travel mm Tolerance mm	: 800 : 10.55 : +- 0.10	
FUEL DELIVERY CHA	ARACTERISTICS	
Aneroid pressure hPa	: -	
Rated speed rpm Del. quantity		
cm3/1000 strokes Tolerance	: 52.0	
cm3/1000 strokes Check tolerance	: +- 1.5	
cm3/1000s.	: +- 3.0	
Aneroid pressure		
hPa Rated speed rpm	: – : 800	
Del. quantity cm3/1000 strokes		
Tolerance cm3/1000 strokes	: ← 1.5	
Check tolerance		
cm3/1000s.	: +- 3.0	
STARTING FUEL DEL	IVERY	
Rated speed rpm	: 100	
rack travel mm Tolerance mm	: 20.00 : +- 1.00	
LOW IDLE		
Rated speed rpm	: 400	
Rack travel in mm Tolerance mm	: 7.20 : + 0.10	

Del. quantity cm3/1000 strokes	:	12.5
Tolerance cm3/1000 strokes	: +-	1.5
Check tolerance cm3/1000S.	: +-	3.5
Spreed Tolerance		
cm3/1000 strokes Check tolerance	:	4.0
cm3/1000s.	:	6.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 29.04.97 Test oil : ISO 4113

Combination No. : 0 400 846 598

Injection pump

Pump designation : PES6A90D410RS2813 EP type number : 0 410 896 089

Governor

Governer design. : RQV300...1050AB1265L

Governer no. : 0 420 212 234

Cust. part No. :

Customer—spec. information
Customer : IVECO-FIAT

Motor : 8065.25.094 Power KW : 145.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 2.30
Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.35 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm: 12.25

Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 80.0

Tolerance

cm3/1000 strokes : +- 0.5

Check tolerance

cm3/1000s. : +- 2.5

Spreed		1
Tolerance		control lever
cm3/1000 strokes	: 3.0	<pre>position degree : - 1</pre>
		+ Rated speed rpm : 1200
Check tolerance		†
cm3/1000s.	: 7.0	+ Rack travel in mm : 9.50
		I
Rated speed rpm	: 400	FULL LOAD DELIVERY AT FULL LOAD STO
Rack travel in m	m: 8.30	Rated speed rpm : 1050
Tolerance mm		+ Aneroid pressure
Del. quantity		+ hPa : -
cm3/1000 strokes	12.0	Del. quantity
Tolerance		+ cm3/1000 strokes : 80.0
cm3/1000 strokes	: +- 2.N	+ Tolerance
Check tolerance		+ cm3/1000 strokes : +- 0.5
cm3/1000s.	: +- 4.0	+ Check tolerance
Spreed	· · · · · · · · · · · · · · · · · · ·	- cm3/1000s. : + 2.5
Tolerance		+ Spreed
cm3/1000 strokes	: 4.5	† Tolerance
Check tolerance	• •••	cm3/1000 strokes : 3.0
cm3/1000s.	: 7.0	+ Check tolerance
CIID7 (0000).		+ cm3/1000s. : 7.0
GUIDE SLEEVE TRA	VEI	+ control lever
		position degree : 116.0
Rated speed rpm	: 740	tolerance degree : +- 4.0
guide sleeve	•	+
travel mm	: 4.95	+ RATED SPEED
Tolerance mm	: +- 0.25	† rack travel mm : 11.20
		+ Rated speed rpm : 1095
Rated speed rpm	: 380	+ Tolerance 1/min : +- 5
guide sleeve		†
travel mm	: 1.85	+ rack travel mm : 4.00
Tolerance mm	: +- 0.25	Rated speed rpm : 1205
	400	† Tolerance 1/min : +- 15
Rated speed rpm	: 400	†
guide sleeve	2.25	rack travel mm : 0.50
travel mm	: 2.25	+ Tolerance mm : + 0.50
Tolerance mm	: +- 0.25	+ Rated speed rpm : 1320
Rated speed rpm	: 460	Į
guide sleeve		1
travel mm	: 2.85	
Tolerance mm	: + 0.25	LOW IDLE
	. 1105	+
Rated speed rpm	: 1105	T anning Lawren
guide sleeve	. 0 75	t control lever
travel mm	: 8.35	position degree : 79.0
Tolerance mm	: +- 0.25	tolerance degree : +- 4.0
		Setting point w/out bumper spring
GUIDE SLEEVE POS	ITION	+

GUIDE SLEEVE POSITION

Rated speed rpm	: 300
CRT mm min.	: > 10.80
Testing:	
Rated speed rpm rack travel mm Tolerance mm	
Rated speed rpm	: 525
TORQUE CONTROL	
Dimension a mm Rated speed rpm rack travel mm Tolerance mm	: 1.30 : 1050 : 12.25 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	
Rated speed rpm rack travel mm Tolerance mm	: 750 : 12.80 : + 0.10
Rated speed rpm rack travel mm Tolerance mm	: 850 : 12.45 : + 0.15
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 700 : 13.55 : + 0.05
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 12.25 : + 0.10
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 580 : 13.35 : ← 0.05
Pressure hPa rack travel mm Tolerance mm	: 540 : 12.90 : +- 0.10

Start interlock	 	<u> </u>	··
Rated speed rpm Rated speed rpm	: >	100 320	
Check speed 1/min Check	: >	80	
speed 1/min	: <	340	
FUEL DELIVERY CHA	ARACTER	ISTICS	
Aneroid pressure	 -		

hPa Rated speed rpm	: - : 750
Del. quantity cm3/1000 strokes Tolerance	: 82.0
cm3/1000 strokes Check tolerance	: +- 1.5
cm3/1000s.	: +- 3.5
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: - : 500 : 70.0 : + 0.5 : + 2.5

STARTING FUEL DELIVERY

ESS test: With 24 V solenoid activated, rack must reach start position in max. control lever setting.

Rated speed rpm	: 100
rack travel mm	: 20.25
Tolerance mm	: +- 0.75
Del. quantity	
cm3/1000 strokes	: 115.0
Tolerance	
cm3/1000 strokes	: +- 7.5
Check tolerance	
cm3/1000s.	: +- 10.0

LOW IDLE

Rated speed rpm	:		400
Rack travel in mm Tolerance mm Del. quantity	-	+-	8.30 0.10
cm3/1000 strokes Tolerance	:		12.0
cm3/1000 strokes Check tolerance	:	+-	2.0
cm3/1000s. Spreed	:	+-	4.0
Tolerance cm3/1000 strokes Check tolerance	:		4.5
cm3/1000s.	:		7.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 29.04.97 Edition : ISO 4113 Test oil

Combination No. : 0 400 846 600

Injection pump

Pump designation : PES6A90D410RS2818 EP type number : 0 410 896 091

Governor

Governer design. : RQV300...1500AB1266L

Governer no. : 0 420 212 236

Cust. part No. :

Customer-spec. information

Customer : IVECO-FIAT : 8060,25,670 Motor : 175.0

Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C 40 Tolerance °C 2.0

Overflow valve : 1 419 922 198

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

173.5 bar Tolerance bar : +- 1.5

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm 2.80 : + 0.05Tolerance mm

Check

: +- 0.75 tolerance mm

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

: 1-5-3-6-2-Firing order

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance *NW : **←** 0.75

BASIC SETTING

1500 Rated speed rpm :

Rack travel in mm : 12.35 : +- 0.05 Tolerance mm

Del. quantity

cm3/1000 strokes : 79.5

Tolerance

cm3/1000 strokes : +- 0.5

Check tolerance

2.5 cm3/1000s.

Spreed

Tolerance cm3/1000 strokes	. 70	t control loven
Cinstituou strokes	; 3.0	t control lever
Check tolerance		_ + position degree : - 1 + Rated speed rpm : 1740
cm3/1000S.	: 4.5	T Rated speed (pill : 1140
CIID7 10000.	• 4.5	Rack travel in mm: 11.30
		Tolerance mm : +- 1.30
		Total allow min
Rated speed rpm	: 300	
		FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in m	m: 9.50	+
Tolerance mm	: +- 0.10	+ Rated speed rpm : 1500
Del. quantity		+ Aneroid pressure
cm3/1000 strokes	: 15.0	+ hPa : -
Tolerance		+ Del. quantity
cm3/1000 strokes		+ cm3/1000 strokes : 79.5
Check tolerance		+ Tolerance
cm3/1000s.	: ← 5.0	cm3/1000 strokes : + 0.5
Spreed		+ Check tolerance
Tolerance cm3/1000 strokes	. 25	- cm3/1000s. : +- 2.5
Check tolerance		+ Spreed + Tolerance
cm3/1000s.		+ cm3/1000 strokes : 3.0
CIDA 10003.	• 4.5	Check tolerance
		- cm3/1000s. : 4.5
(B) SETTING OF I	NAFCTION PUMP	
WITH GOVERNOR	102011011 1011	1
		+ CONTROL LEVER
GUIDE SLEEVE TRAV	VEL	+
		+ control lever
Rated speed rpm	: 640	+ position degree : 121.0
guide sleeve	*** 1 F	tolerance degree : +- 4.0
travel mm	3.45	TATES COSES
Tolerance mm	: + 0.25	+ RATED SPEED
Rated speed rpm	. 250	rack travel mm : 11.30 Rated speed rpm : 1595
guide sleeve	; 250	Tolerance 1/min : +- 5
travel mm	: 1.15	T receive minit
Tolerance mm		rack travel mm : 4.00
rocci aricc inii		Rated speed rpm : 1755
Rated speed rpm	: 435	+ Tolerance 1/min : +- 15
• • •		+
travel mm	: 2.25	† rack travel mm : 0.50
guide sleeve travel mm Tolerance mm	: ← 0.25	+ Tolerance mm : +- 0.50
		Rated speed rpm : 1870
Rated speed rpm	: 485	+
guide sleeve		+
travel mm	: 2.55	†
Tolerance mm	: ← 0.25	1011 701 5
	1/40	+ LOW IDLE
Rated speed rpm	: 1610	†
guide sleeve	. 075	T control loven
travel mm	. 4 0.25	control lever
Tolerance mm	: 0.25	<pre>position degree : 76.0 tolerance degree : +- 4.0</pre>
		T COLET ATILE GEGIES . T- 4.0
GUIDE SLEEVE POSI	TTON	T Setting point w/out bumper spring
ANTHE SEFERE LAST	L 1 & VIT	Contained bottle woods bumber obtained

Rated speed rpm

200

CRT mm min. : > 10.60

Testing:

Rated speed rpm : 300 rack travel mm : 9.50 Tolerance mm : +-0.10

TORQUE CONTROL

Rated speed rpm : 1500 rack travel mm : 12.35 Tolerance mm : +- 0.05

Rated speed rpm : 500 rack travel mm : 12.40 Tolerance mm : + 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : -Rated speed rpm : 1000 Del. quantity

cm3/1000 strokes : 75.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +- 3.5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.25
Tolerance mm : + 0.75
Del. quantity
cm3/1000 strokes : 150.0
Tolerance

cm3/1000 strokes : +- 5.0

Check tolerance

cm3/1000s. : +- 8.0

LOW IDLE

Rated speed rpm : 300

Rack travel in mm : 9.50 Tolerance mm : + 0.10

Del. quantity

cm3/1000 strokes : 15.0

Tolerance

cm3/1000 strokes : +- 3.0

Check tolerance

cm3/1000s. : +- 5.0

Spreed

Tolerance

cm3/1000 strokes : 2.5

Check tolerance

cm3/1000s. : 4.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 29.04.97 Test oil : ISO 4113

Combination No. : 0 400 846 607

Injection pump

Pump designation : PES6A90D410RS2813 EP type number : 0 410 896 089

Governor

Governer design. : RQV300...1050AB1265

: -3L

Governer no. : 0 420 212 241

Cust. part No. : 112069

Customer-spec. information Customer : IVECO-FIAT Motor : 8065.25.099

Power KW : 135.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : + 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

DEMARKO

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 2.80 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50
Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance $^{\circ}NW$: + 0.75

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm : 12.75 Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes : 78.0

Tolerance

cm3/1000 strokes : +- 0.5

Check tolerance

cm3/1000s. : +- 2.5

Sn	reed
S	CCU

Tolerance

cm3/1000 strokes : 3.0

Check tolerance

cm3/1000s. : 7.0

Rated speed rpm : 425

Rack travel in mm : 8.50 Tolerance mm : + 0.10

Del. quantity

cm3/1000 strokes : 9.0

Tolerance

cm3/1000 strokes : +- 2.0

Check tolerance

cm3/1000s. : +- 4.0

Spreed

Tolerance

cm3/1000 strokes : 4.5

Check tolerance

cm3/1000s. : 7.0

(B) SETTING OF INJECTION PUMP WITH GOVERNOR

GUIDE SLEEVE TRAVEL

Rated speed rpm : 750

guide sleeve

travel mm : 5.05

Tolerance mm : + 0.25

Rated speed rpm : 380

quide sleeve

travel mm : 1.85

Tolerance mm : \leftarrow 0.25

Rated speed rpm : 430

guide sleeve

travel mm : 2.55

Tolerance mm : + 0.25

Rated speed rpm : 460

guide sleeve

travel mm : 2.85

Tolerance mm : \leftarrow 0.25

Rated speed rpm : 1130

guide sleeve

travel mm : 8.25

Tolerance mm : + 0.25

GUIDE SLEEVE POSITION

control lever

position degree : - 1

Rated speed rpm : 1200

Rack travel in mm : 9.50 Tolerance mm : +- 2.70

FULL LOAD DELIVERY AT FULL LOAD STOP

Rated speed rpm : 1050

Aneroid pressure

hPa : 700

Del. quantity

cm3/1000 strokes : 78.0

Tolerance

cm3/1000 strokes : +- 0.5

Check tolerance

cm3/1000s. : +- 2.5

Spreed

Tolerance

cm3/1000 strokes : 3.0

Check tolerance

cm3/1000s. : 7.0

CONTROL LEVER

control lever

position degree : 117.0 tolerance degree : + 4.0

RATED SPEED

rack travel mm : 11.70
Rated speed rpm : 1125

Rated speed rpm : 1125
Tolerance 1/min : + 5

rack travel mm : 4.00

Rated speed rpm : 1235

Tolerance 1/min : + 15

rack travel mm : 0.50

Tolerance mm : \leftarrow 0.50

Rated speed rpm : 1320

LOW IDLE

control lever

position degree : 79.0

tolerance degree : +- 4.0

Setting point w/out bumper spring

Rated speed rpm	: 325
CRT mm min.	: > 11.00
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 425 : 8.50 : +- 0.10
Rated speed rpm	: 535
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 1050 : 12.75 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 500 : 14.25 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 750 : 13.90 : +- 0.05
Rated speed rpm rack travel mm Tolerance mm	: 900 : 13.25 : + 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 700 : 14.20 : + 0.05
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 12.95 : + 0.05
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 450 : 13.25 : + 0.15
Pressure hPa rack travel mm Tolerance mm	: 500 : 13.85 : + 0.05

Start interlock			
Rated speed rpm	: >	290 340	
Rated speed rpm	: `	540	
Check speed 1/min	: >	270	
Check	. /	210	
speed 1/min	: <	360	
FUEL DELIVERY CHA	RACTE	RISTICS	
Aneroid pressure			<u>-</u>
hPa	:	700	
Rated speed rpm Del. quantity	:	750	
cm3/1000 strokes	:	86.0	
Tolerance cm3/1000 strokes	: +-	1.5	
Check tolerance	• •		
cm3/1000s.	: +-	3.5	
Aneroid pressure			-
hPa	:	_	
Rated speed rpm Del. quantity	:	500	
cm3/1000 strokes	:	66.0	
Tolerance		0.5	
cm3/1000 strokes Check tolerance	: +-	0.5	
cm3/1000s.	: +-	2.5	
STARTING FUEL DEL	TVFRY		
ESS test: With 1 rack must reach			
control lever se			XI III NIG
		•	
	_	100	
Rated speed rpm rack travel mm	:	100 20.25	

LOW IDLE

Rated speed rpm	:	425
Rack travel in mm Tolerance mm Del. quantity	: : +-	8.50 0.10
cm3/1000 strokes Tolerance	:	9.0
cm3/1000 strokes	: +-	2.0
Check tolerance cm3/1000s. Spreed	: +-	4.0
Tolerance cm3/1000 strokes Check tolerance	:	4.5
cm3/1000s.	:	7.0

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... : 01.08.97 Edition : ISO 4113 Test oil Combination No. : 0 400 863 008 Injection pump Pump designation : PES3A90D320/3RS2658 EP type number : 0 410 893 004 Governor Governer design. : RSV325...1500A2C505 : -3R : 0 420 233 229 Governer no. Cust. part No. : 1-7545 Customer-spec. information Customer : MWM Motor : D226B-3 Power KW : 49.5 TEST BENCH REQUIREMENTS Inlet line : 3.1 Test oil inlet temp. °C Tolerance °C : +- 2.0 Overflow valve : 1 419 992 198 Inlet press. bar : 1.5 Test nozzle holde : 0 681 343 009 assembly Opening pressure : 173.5 bar : +- 1.5 Tolerance bar

: 1 680 750 014

Outside diameter : 6.0

x inside diameter x length mm	: 2.0 : 60 0
REMARKS	
(A) INJECTION PUMP Set equal delivery per values	
BEGINNING OF DELIV	ERY
Test pressure bar Tolerance bar	: 26.0 : +- 1.0
Prestroke mm Tolerance mm Check	: 3.00 : ← 0.05
tolerance mm	: +- 0.10
Rack travel in mm Tolerance mm	: 10.50 : +- 1.50
Firing order	: 1- 2- 3
Phasing Tolerance Check	: 0-120-240 : +- 0.50
tolerance *NW	: +- 0.75
Beginning of deliv	ery differende
and maximum rack travel Difference ° CS	: 9.00 : 4.00
BASIC SETTING	
Rated speed rpm	: 1100
Rack travel in mm Tolerance mm	: 11.25 : + 0.05
Del. quantity cm3/1000 strokes	: 90.0

H01

Test lines

Tolerance cm3/1000 strokes	: +- 0.5	+ Tolerance + cm3/1000 strokes	: +- 0.5
Check tolerance		Check tolerance cm3/1000s.	: +- 2.5
cm3/1000s.	: 2.5	Spreed Tolerance	
Spreed		cm3/1000 strokes Check tolerance	: 3.0
Tolerance cm3/1000 strokes	: 3.0	cm3/1000s.	: 5.0
Check tolerance cm3/1000s.	: 5.0	CONTROL LEVER	
		control lever	: 93.0
Rated speed rpm	: 325	tolerance degree	
Rack travel in mm Tolerance mm		RATED SPEED rack travel mm	
Del. quantity cm3/1000 strokes	: 49.5	Rated speed rpm Tolerance 1/min	
Tolerance cm3/1000 strokes Check tolerance	: +- 3.0	† rack travel mm + Rated speed rpm	
cm3/1000S. Spreed	: +- 5.0	Tolerance 1/min	: +- 15
Tolerance cm3/1000 strokes	: 2.5	+ rack travel mm + Tolerance mm	: +- 0.55
Check tolerance cm3/1000s.	: 4.5	Rated speed rpm	
(B) SETTING OF IN. WITH GOVERNOR	JECTION PUMP	rack travel mm Rated speed rpm Tolerance 1/min	: 1225
GUIDE SLEEVE POSI	TION	LOW IDLE	
control lever position degree Rated speed rpm	: - 3 : 800	control lever position degree tolerance degree	: 67.0 : +- 4.0
Rack travel in mm Tolerance mm		Setting point w/	out bumper spring
governor spring pre-tension		Rated speed rpm rack travel mm Tolerance mm	: 9.30
click setting x	: 2.50	† Testing:	
	Y AT FULL LOAD STOP	Rated speed rpm rack travel mm	: 9.80
Rated speed rpm Aneroid pressure	: 1100	+ Tolerance mm	
hPa Del. quantity cm3/1000 strokes	: - : 90.0	+ rack travel mm + Rated speed rpm + Tolerance 1/min	: 510
CH13/ 1000 3CT OKES	. ,0.0	1 Total and Thirty	. 50

H₀2

: 325 : 9.30 : + 0.10 : 325 : 9.80 : +- 0.10 rack travel mm : 2.00
Rated speed rpm : 510
Tolerance 1/min : + 30 TORQUE CONTROL

Rated speed rpm : 1100 rack travel mm : 11.25 Tolerance mm : +- 0.05

Rated speed rpm : 500 rack travel mm : 11.30 Tolerance mm : + 0.10

STARTING FUEL DELIVERY

100 Rated speed rpm : rack travel mm 18.90 : +- 2.10 Tolerance mm

Del. quantity

cm3/1000 strokes : 115.0

LOW IDLE

Rated speed rpm : 325

9.80 Rack travel in mm: Tolerance mm : + 0.10

Del. quantity

cm3/1000 strokes : 49.5

Tolerance

cm3/1000 strokes : + 3.0

Check tolerance

: +- 5.0 cm3/1000s.Spreed

Tolerance

cm3/1000 strokes : 2.5

Check tolerance

: 4.5 cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 01.08.97 Test oil : ISO 4113

Combination No. : 0 400 863 019

Injection pump

Pump designation : PES3A90D320/3RS2826

EP type number : 0 410 893 007

Governor

Governer design. : RSV325...1150A5C505

: -5R

Governer no. : 0 420 233 289

Cust. part No. :

Customer—spec. information Customer : MWM

Motor : TD 226 B3

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1- 2- 3

Phasing : 0-120-240
Tolerance : + 0.50

Check

tolerance *NW : + 0.75

Beginning of delivery differende

and maximum rack

travel : 9.00 Difference * CS : 4.00

BASIC SETTING

Rated speed rpm : 1150

Rack travel in mm : 9.90 Tolerance mm : + 0.10

Del. quantity

cm3/1000 strokes : 68.0

Tolerance

cm3/1000 strokes : +- 0.5

Check tolerance cm3/1000s. : +- 2.5	Check tolerance cm3/1000s. : +- 2.5 Spreed
Spreed	Tolerance cm3/1000 strokes : 3.0
Tolerance cm3/1000 strokes : 3.0	Check tolerance cm3/1000s. : 5.0
Check tolerance cm3/1000s. : 5.0	CONTROL LEVER
	CONTROL LEVER
Rated speed rpm : 325	<pre>control lever position degree : 98.0 tolerance degree : +- 4.0</pre>
Rack travel in mm : 5.70	•
Tolerance mm : + 0.10 + Del. quantity +	RATED SPEED rack travel mm : 8.90
cm3/1000 strokes : 8.0	Rated speed rpm : 1205
Tolerance	Tolerance 1/min : +- 5
cm3/1000 strokes : + 3.0 +	
Check tolerance + 5.0 +	rack travel mm : 4.00 Rated speed rpm : 1245
Spreed	Tolerance 1/min : +- 15
Tolerance +	
cm3/1000 strokes : 2.5	rack travel mm : 0.85 Tolerance mm : +- 0.55
Check tolerance + cm3/1000s. : 4.5 +	Rated speed rpm : 1410
+	
(B) SETTING OF INJECTION PUMP + WITH GOVERNOR +	rack travel mm : 4.00 Rated speed rpm : 1260 Tolerance 1/min : +- 15
GUIDE SLEEVE POSITION	***************************************
+	LOW IDLE
t de la companya de l	
control lever + position degree : - 3 +	control lever
Rated speed rpm : 800	position degree : 67.0
Rack travel in mm: 0.50	tolerance degree : +- 4.0
Tolerance mm : +- 0.20	Setting point w/out bumper spring
governor spring	Rated speed rpm : 325
pre-tension +	rack travel mm : 6.20
click setting $x : 3.25$	Tolerance mm : +- 0.10
	Testing:
FULL LOAD DELIVERY AT FULL LOAD STOP	-
Rated speed rpm : 750	Rated speed rpm : 325
Rated speed rpm : 750 + Aneroid pressure +	rack travel mm : 5.70 Tolerance mm : +- 0.10
hPa : -	
Del. quantity	rack travel mm : 2.00
cm3/1000 strokes : 68.0	Rated speed rpm : 430 Tolerance 1/min : +- 30
cm3/1000 strokes : +- 0.5	TOTAL TRAINING TOTAL STATE OF THE STATE OF T
+	

TORQUE CONTROL

Rated speed rpm : 1150 rack travel mm : 9.90 Tolerance mm : + 0.10

Rated speed rpm : 500 rack travel mm : 9.95 Tolerance mm : + 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : -Rated speed rpm : 1150

Del. quantity

cin3/1000 strokes : 76.5

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : \leftarrow 3.5

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.25 Tolerance mm : + 0.75

Del. quantity

cm3/1000 strokes : 137.0

Tolerance

cm3/1000 strokes : +- 5.0

Check tolerance

cm3/1000s. : +- 8.0

LOW IDLE

Rated speed rpm : 325

Rack travel in mm : 5.70 Tolerance mm : + 0.10

Del. quantity

cm3/1000 strokes : 8.0

Tolerance

cm3/1000 strokes : + 3.0

Check tolerance

cm3/1000s. : \leftarrow 5.0

Spreed

Tolerance

cm3/1000 strokes : 2.5

Check tolerance cm3/1000s.

: 4.5

End of test specification sheet

H06

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 01.08.97 : ISO 4113

Combination No. : 0 400 863 024

Injection pump

Pump designation : PES3A95D410/3RS2905

EP type number : 0 410 893 996

Governor

Governer design. : RSV325...1250A5C917L

Governer no. : 0 420 232 639

Cust. part No. : 0423 2328 KY

Customer-spec. information Customer : KHD-DMI Motor : F3L912 Power KW 44.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40 Tolerance °C : +- 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly

: 0 681 343 009

Opening pressure than : 173.5 than : + 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

x inside diameter: 2.0 x length mm : 600

per values ____

REMARKS

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 3.00 Tolerance mm : + 0.05 Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1- 3- 2

Phasing : 0-120-240
Tolerance : + 0.50

Check

tolerance °NW : + 0.75

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm : 11.35 Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 76.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance cm3/1000s. : +- 3.0

Spreed

H07

Tolerance cm3/1000 strokes : 3.5	+ Check tolerance + cm3/1000s. : 8.0
Check tolerance cm3/1000s. : 8.0	<u> </u>
	CONTROL LEVER
Rated speed rpm : 325	control lever position degree : 107.0
	tolerance degree : +- 4.0
Rack travel in mm: 8.50	TATEL SPEED
Tolerance mm : +- 0.10 Del. quantity	+ RATED SPEED + rack travel mm : 10.35
cm3/1000 strokes : 11.5	Rated speed rpm : 1295
Tolerance	+ Tolerance 1/min : + 5
cm3/1000 strokes : +- 2.0 Check tolerance	+ rack travel mm : 4.00
cm3/1000s. : +- 4.5	Rated speed rpm : 1355
Spreed	+ Tolerance 1/min : +- 15
Tolerance cm3/1000 strokes : 5.5	made traval and a 0.05
cm3/1000 strokes : 5.5 Check tolerance	+ rack travel mm : 0.85 + Tolerance mm : + 0.55
cm3/1000s. : 9.9	Rated speed rpm : 1530
	†
(B) SETTING OF INJECTION PUMP	+ rack travel mm : 4.00 + Rated speed rpm : 1380
WITH GOVERNOR	+ Tolerance 1/min : + 15
	+
	†
GUIDE SLEEVE POSITION	
	+ LOW IDLE
control lever	‡
position degree : FREE	+ control lever
Rated speed rpm : 800	+ position degree : 74.0
Rack travel in mm: 0.50	tolerance degree : +- 4.0
Tolerance mm : + 0.20	Setting point w/out bumper spring
	+
governor spring pre-tension	+ Rated speed rpm : 325 + rack travel mm : 8.00
click setting x : 4.25	+ rack travel mm : 8.00 + Tolerance mm : + 0.10
	+
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 100
FULL EDAD DELIVERY AT FULL LOAD STOP	T CRT mm min. : > 19.50
Rated speed rpm : 1250	+
Aneroid pressure	+ Testing:
hPa : - Del. quantity	Rated speed rpm : 325
cm3/1000 strokes : 76.0	+ rack travel mm : 8.50
Tolerance	rack travel mm : 8.50 Tolerance mm : + 0.10
cm3/1000 strokes : + 1.0	t mark traval mm · 2.00
Check tolerance cm3/1000s. : +- 3.0	+ rack travel mm : 2.00 + Rated speed rpm : 510
Spreed	+ Tolerance 1/min : + 30
Tolerance	†
cm3/1000 strokes : 3.5	TORQUE CONTROL
	I MAGE COMMON

Rated speed rpm : 1250 rack travel mm : 11.35 : +- 0.05 Tolerance mm

Rated speed rpm : 500

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 17.00 Tolerance mm : → 0.75 Del. quantity cm3/1000 strokes : 90.0 Tolerance

cm3/1000 strokes : +- 7.5

Check tolerance

cm3/1000s. : +- 10.0

LOW IDLE

Rated speed rpm : 325

Rack travel in mm : 8.50 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 11.5 Tolerance cm3/1000 strokes : +- 2.0 Check tolerance

cm3/1000s. : +- 4.5 Spreed

Tolerance

cm3/1000 strokes : 5.5

Check tolerance

: 9.9 cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 01.08.97 Edition : ISO 4113 Test oil

Combination No. : 0 400 864 057

Injection pump

Pump designation : PES4A90D320/3RS2659

EP type number : 0 410 894 028

Governor

Governer design. : RSV325...1500A2C505

: -2R

: 0 420 233 196 Governer no.

Cust. part No. :

Customer-spec. information Customer : MWM Motor : D226B-4

Power KW : 73.5

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

40 temp. °C Tolerance °C 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

173.5 bar : **←** 1.5 Tolerance bar

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +- 1.0

3.00 Prestroke mm : +- 0.05 Tolerance mm

Check

tolerance mm : + 0.10

Rack travel in mm: 10.50 : **←** 1.50 Tolerance mm

Firing order : 1-3-4-2

Phasing : 0-90-180-270

: +- 0.50 Tolerance

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

Beginning of delivery differende

and maximum rack

9.00 travel Difference CS : 4.00

BASIC SETTING

Rated speed rpm : 1500

Rack travel in mm : 11.25 Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 90.5

Tolerance

cm3/1000 strokes : +- 0.5

H10

Check tolerance cm3/1000s.	: + 2.5 ‡	Check tolerance cm3/1000s. : +- 2.5 Spreed
Spreed		Tolerance cm3/1000 strokes : 3.0
Tolerance cm3/1000 strokes	: 3.0	Check tolerance cm3/1000s. : 5.0
Check tolerance cm3/1000s.	: 5.0	
	 ‡	CONTROL LEVER
Rated speed rpm	+	<pre>control lever position degree : 113.0 tolerance degree : +- 4.0</pre>
Rack travel in mm Tolerance mm		RATED SPEED
Del. quantity	+	rack travel mm : 9.50
cm3/1000 strokes Tolerance	+	Rated speed rpm : 1545 Tolerance 1/min : +- 5
cm3/1000 strokes Check tolerance	: +- 3.0	rack travel mm : 4.00
cm3/1000s.	: + 5.0	Rated speed rpm : 1605
Spreed Tolerance	‡	Tolerance 1/min : +- 15
cm3/1000 strokes	: 2.5	rack travel mm : 0.85 Tolerance mm : +- 0.55
Check tolerance cm3/1000s.	: 4.5	Tolerance mm : +- 0.55 Rated speed rpm : 1780
(B) SETTING OF IN. WITH GOVERNOR	JECTION PUMP	Rated speed rpm : 1630 Tolerance 1/min : +- 15
GUIDE SLEEVE POSI	TION	LOW IDLE
control lever position degree	3	control lever
Rated speed rpm	: 800	position degree : 74.0 tolerance degree : +- 4.0
Rack travel in mm Tolerance mm		Setting point w/out bumper spring
governor_spring	Ţ	Rated speed rpm : 325
pre-tension click setting x	: 4.75	rack travel mm : 6.60 Tolerance mm : + 0.10
FULL LOAD DELIVER	Y AT FULL LOAD STOP	Rated speed rpm : 100
	+	CRT mm min. : > 19.50
Rated speed rpm Aneroid pressure hPa	: -	Testing:
Del. quantity		Rated speed rpm : 325 rack travel mm : 7.10
cm3/1000 strokes Tolerance	; 90.5	rack travel mm : 7.10 Tolerance mm : +- 0.10
cm3/1000 strokes	: +- 0.5	rack travel mm : 2.00

Rated speed rpm : 495 Tolerance 1/min : + 30

TORQUE CONTROL

Rated speed rpm : 1500 rack travel mm : 11.25
Tolerance mm : + 0.05

Rated speed rpm : 500 rack travel mm : 11.30 Tolerance mm : + 0.10

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.25 Tolerance mm : + 0.75

Del. quantity cm3/1000 strokes : 135.0

Tolerance

cm3/1000 strokes : +- 5.0

Check tolerance

cm3/1000S. : +- 8.0

LOW IDLE

Rated speed rpm : 325

Rack travel in mm : 7.10 Tolerance mm : + 0.10

Del. quantity

cm3/1000 strokes : 11.0

Tolerance

cm3/1000 strokes : \leftarrow 3.0

Check tolerance

cm3/1000s. : +- 5.0

Spreed

Tolerance

cm3/1000 strokes : 2.5

Check tolerance

: 4.5 cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 01.08.97 Test oii : ISO 4113

Combination No. : 0 400 864 094

Injection pump

Pump designation : PES4A90D320/3RS2743

EP type number : 0 410 894 034

Governor

Governer design. : RSV325...1150A5C505

: -5R

Governer no. : 0 420 233 289

Cust. part No. :

Customer—spec. information Customer : MWM

Motor : TD226B-4 Power KW : 63.0

TEST BENCH REQUIREMENTS

Inlet line : 1.3

Test oil inlet

temp. °C : 40 Tolerance °C : + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : +- 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PURE BETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.00 Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-3-4-2

Phasing : 0-90-180-270

Tolerance : \leftarrow 0.50

Check

tolerance *NW : + 0.75

Beginning of delivery differende

and maximum rack

travel : 9.00 Difference * CS : 4.00

BASIC SETTING

Rated speed rpm : 1150

Rack travel in mm: 9.55

Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes :

cm3/1000 strokes : 72.0

Tolerance

cm3/1000 strokes : + 0.5

Check tolerance cm3/1000s. : +- 2.5	Check tolerance cm3/1000s. : +- 2.5 Spreed
Spreed	Tolerance cm3/1000 strokes : 3.0
Tolerance cm3/1000 strokes : 3.0	Check tolerance cm3/1000s. : 5.0
Check tolerance cm3/1000s. : 5.0	
	CONTROL LEVER
Rated speed rpm : 325	control lever position degree : 100.0 tolerance degree : +- 4.0
Rack travel in mm : 6.70 + Tolerance mm : +- 0.10 +	
Del. quantity	RATED SPEED rack travel mm : 8.50
cm3/1000 strokes : 13.0	Rated speed rpm : 1195
Tolerance + 3.0 +	Tolerance 1/min : +- 5
Check tolerance	rack travel mm : 4.00
cm3/1000s. : + 5.0	Rated speed rpm : 1225
Spreed + Tolerance +	Tolerance 1/min : +- 15
cm3/1000 strokes : 2.5	rack travel mm : 0.85
Check tolerance + cm3/1000s. : 4.5 +	Tolerance nm : +- 0.55 Rated speed rpm : 1330
cm3/1000s. : 4.5	Rated speed rpm : 1330
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	rack travel mm : 4.00 Rated speed rpm : 1245 Tolerance 1/min : +- 15
GUIDE SLEEVE POSITION	LOW IDLE
control lever	
position degree : - 3	control lever
Rated speed rpm : 800	position degree : 69.0
Rack travel in mm: 0.50	tolerance degree : +- 4.0
Tolerance mm : +- 0.20	Setting point w/out bumper spring
governor spring	Rated speed rpm : 325
pre-tension + click setting x : 3.20 +	rack travel mm : 6.20 Tolerance mm : +- 0.10
terick setting x : 3.20	
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 100
· · · · · · · · · · · · · · · · · · ·	CRT mm min. : > 19.50
Rated speed rpm : 1150 +	Testing:
hPa : - +	
Del. quantity cm3/1000 strokes : 72.0	Rated speed rpm : 325
Tolerance +	Rated speed rpm : 325 rack travel mm : 6.70 Tolerance mm : + 0.10
cm3/1000 strokes : + 0.5	
†	rack travel mm : 2.00

Rated speed rpm : 445 Tolerance 1/min : + 30

TORQUE CONTROL

Rated speed rpm : 1150 rack travel mm : 9.55 Tolerance mm : + 0.05

Rated speed rpm : 500 rack travel mm : 9.60 Tolerance mm : + 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : Rated speed rpm : 500
Del. quantity

cm3/1000 strokes : 56.0

Tolerance

cm3/1000 strokes : \leftarrow 2.5

Check tolerance

cm3/1000s. : +- 4.5

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.25 Tolerance mm : + 0.75

Del. quantity

cm3/1000 strokes : 143.0

Tolerance

cm3/1000 strokes : + 5.0

Check tolerance

cm3/1000s. : + 8.0

LOW IDLE

Rated speed rpm : 325

Rack travel in mm : 6.70 Tolerance mm : + 0.10

Del. quantity

cm3/1000 strokes : 13.0

Tolerance

cm3/1000 strokes : +- 3.0

Check tolerance

cm3/1000s. : +- 5.0

Spreed

Tolerance

cm3/1000 strokes : 2.5

Check tolerance

cm3/1000s. : 4.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 10.03.97 : ISO 4113

Combination No. : 0 400 864 102

Injection pump

Pump designation : FES4A95D410/3RS2789

EP type number : 0 410 894 995

Governor

Governer design. : RSV325...1250A5C861L

Governer no. : 0 420 232 624

Cust. part No. : 0423 1789 KY

Customer-spec. information

Customer : KHD-DMI

Motor : F4L912/913_NEU

Power KW

: 59.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C

Tolerance °C

: +- 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly

: 0 681 343 009

Opening pressure

bar

: 173.5

Tolerance bar : + 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0

Tolerance bar : +- 1.0

Prestroke mm 3.00 : +- 0.05

Tolerance mm Check

: +- 0.10 tolerance mm

Rack travel in mm : 10.50

Tolerance mm : +- 1.50

Firing order : 1-- 3- 4- 2

: 0-90-180-270 Phasing

Tolerance : **←** 0.50

Check

tolerance *NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm : 11.35

Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 76.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s.

: +- 3.0

Spreed

H16

Tolerance cm3/1000 strokes	: 3.5	Check tolerance cm3/1000s. : 8.0
Check tolerance cm3/1000s.	: 8.0	
		CONTROL LEVER
Rated speed rpm	: 325	control lever position degree : 102.0 tolerance degree : +- 4.0
Rack travel in mm Tolerance mm		RATED SPEED
Del. quantity cm3/1000 strokes Tolerance	: 11.5	rack travel mm : 10.35 Rated speed rpm : 1295 Tolerance 1/min : +- 5
cm3/1600 strokes Check tolerance	: + 2.0	rack travel mm : 4.00
cm3/1000s. Spreed Tolerance	: + 4.5	Rated speed rpm : 1339 Tolerance 1/min : +- 15
cm3/1000 strokes Check tolerance	· · · · · · · · · · · · · · · · · · ·	rack travel mm : 0.85
cm3/1000s.		Tolerance mm : +- 0.55 Rated speed rpm : 1510
(B) SETTING OF IN WITH GOVERNOR	JECTION PUMP	rack travel mm : 4.00 Rated speed rpm : 1360 Tolerance 1/min : + 15
GUIDE SLEEVE POSI	TION	LOW IDLE
control lever	.\ + +	
	: FREE	control lever position degree : 69.0
control lever position degree Rated speed rpm Rack travel in mm	: FREE + 800 +	control lever
control lever position degree Rated speed rpm Rack travel in mm Tolerance mm	: FREE + 800 +	control lever position degree : 69.0 tolerance degree : +- 4.0 Setting point w/out bumper spring
control lever position degree Rated speed rpm Rack travel in mm Tolerance mm governor spring pre-tension	: FREE : 800 : 0.50 : +- 0.20	control lever position degree : 69.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00
control lever position degree Rated speed rpm Rack travel in mm Tolerance mm	: FREE : 800 : 0.50 : +- 0.20	control lever position degree : 69.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325
control lever position degree Rated speed rpm Rack travel in mm Tolerance mm governor spring pre-tension click setting x	: FREE : 800 : 0.50 : +- 0.20	control lever position degree : 69.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00
control lever position degree Rated speed rpm Rack travel in mm Tolerance mm governor spring pre-tension click setting x FULL LOAD DELIVER	: FREE : 800 : 0.50 : +- 0.20 : 3.00	control lever position degree : 69.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00 Tolerance mm : + 0.10
control lever position degree Rated speed rpm Rack travel in mm Tolerance mm governor spring pre-tension click setting x	: FREE : 800 : 0.50 : +- 0.20 : 3.00	control lever position degree : 69.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00 Tolerance mm : + 0.10 Rated speed rpm : 100
control lever position degree Rated speed rpm Rack travel in mm Tolerance mm governor spring pre-tension click setting x FULL LOAD DELIVER Rated speed rpm Aneroid pressure hPa Del. quantity	: FREE : 800 : 0.50 : + 0.20 : 3.00 : 3.00	control lever position degree : 69.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00 Tolerance mm : +- 0.10 Rated speed rpm : 100 CRT mm min. :> 19.50 Testing: Rated speed rpm : 325
control lever position degree Rated speed rpm Rack travel in mm Tolerance mm governor spring pre-tension click setting x FULL LOAD DELIVER Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes	: FREE : 800 : 0.50 : + 0.20 : 3.00 : 3.00	control lever position degree : 69.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00 Tolerance mm : +- 0.10 Rated speed rpm : 100 CRT mm min. : > 19.50 Testing: Rated speed rpm : 325 rack travel mm : 325 rack travel mm : 325
control lever position degree Rated speed rpm Rack travel in mm Tolerance mm governor spring pre-tension click setting x FULL LOAD DELIVER Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: FREE : 800 : 0.50 : + 0.20 : 3.00 : 3.00 : 1250 : - : 76.0	control lever position degree : 69.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.50 Testing: Rated speed rpm : 325 rack travel mm : 8.50 Tolerance mm : + 0.10
control lever position degree Rated speed rpm Rack travel in mm Tolerance mm governor spring pre-tension click setting x FULL LOAD DELIVER Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: FREE : 800 : 0.50 : + 0.20 : 3.00 : 3.00 : 1250 : - : 76.0 : + 1.0	control lever position degree : 69.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. :> 19.50 Testing: Rated speed rpm : 325 rack travel mm : 8.50 Tolerance mm : + 0.10 rack travel mm : 2.00
control lever position degree Rated speed rpm Rack travel in mm Tolerance mm governor spring pre-tension click setting x FULL LOAD DELIVER Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: FREE : 800 : 0.50 : + 0.20 : 3.00 : 3.00 : 1250 : - : 76.0 : + 1.0	control lever position degree : 69.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.50 Testing: Rated speed rpm : 325 rack travel mm : 8.50 Tolerance mm : + 0.10

Rated speed rpm : 1250 rack travel mm : 11.35 Tolerance mm : +- 0.05

Rated speed rpm : 500

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.25 Tolerance mm : + 0.75

Del. quantity

cm3/1000 strokes : 130.0

Tolerance

cm3/1000 strokes : \leftarrow 7.5

Check tolerance

cm3/1000s. : + 10.0

LOW IDLE

Rated speed rpm : 325

Tolerance mm : 8.50

Del. quantity

cm3/1000 strokes : 11.5

Tolerance

cm3/1000 strokes : \leftarrow 2.0

Check tolerance

cm3/1000s. : +- 4.5

Spreed

Tolerance

cm3/1000 strokes : 5.5

Check tolerance

cm3/1000s. : 9.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 02.08.97 Edition : ISO 4113 Test oil

Combination No. : 0 400 864 103

Injection pump

Pump designation : PES4A95D410/3RS2789

EP type number : 0 410 894 995

Governor

Governer design. : RSV325...1250A5C871L

Governer no. : 0 420 232 626

Cust. part No. : 0423 1876 KY

Customer-spec. information Customer : KHD-DMI Motor : BF4L 913

: 78.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C 40 Tolerance °C : -- 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

: 173.5 bar Tolerance bar : + 1.5

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prescroke mm. : +- 0.05 Tolerance mm

Check

: +- 0.10 tolerance mm

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-3-4-2

: 0-90-180-270 Phasing Phasing Tolerance : **←** 0.50

Check

tolerance *NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm : 13.50 Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes : 87.0

Tolerance cm3/1000 strokes : +- 1.0

Check tolerance cm3/1000s. : +- 3.0

Spreed

Tolerance

cm3/1000 strokes : 3.5

	-
Check tolerance cm3/1000s. : 8.0	CONTROL LEVER
Detect areast are a 725	control lever position degree : 102.0
Rated speed rpm : 325	tolerance degree : +- 4.C
Rack travel in mm: 9.60 Tolerance mm: +- 0.10	RATED SPEED : 12.50
Del. quantity cm3/1 000 strokes : 14.0 Tolerance	Rated speed rpm : 1295 Tolerance 1/min : +- 5
cm3/1000 strokes : +- 2.0 Check tolerance	rack travel mm : 4.00 Rated speed rpm : 1355
cm3/1000s. : +- 4.5 Spreed	Tolerance 1/min : +- 15
Tolerance - cm3/1000 strokes : 5.5 -	rack travel mm : 0.85 Tolerance mm : +- 0.55
Check tolerance - cm3/1000s. : 9.0 -	Rated speed rpm : 1565
-	rack travel mm : 4.00 Rated speed rpm : 1415
(B) SETTING OF INJECTION PUMP - WITH GOVERNOR -	Tolerance 1/min : +- 15
GUIDE SLEEVE POSITION	LOW IDLE
control lever - position degree : FREE - Rated speed rpm : 800 -	control lever position degree : 69.0 tolerance degree : +- 4.0
Rack travel in mm: 0.50 - Tolerance mm : +- 0.20 -	Setting point w/out bumper spring
	r
	Rated speed rpm : 325
governor spring - pre-tension - click setting x : 3.00 -	Rated speed rpm : 325 rack travel mm : 9.10 Tolerance mm : +- 0.10
	rack travel mm : 9.10
pre-tension -	rack travel mm : 9.10 Tolerance mm : +- 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure	rack travel mm : 9.10 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.50 Testing:
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : -	rack travel mm : 9.10 Tolerance mm : +- 0.10 Rated speed rpm : 100 CRT mm min. : > 19.50 Testing: Rated speed rpm : 325
pre-tension click setting x : 3.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 87.0	rack travel mm : 9.10 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.50 Testing:
pre-tension click setting x : 3.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 87.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance	rack travel mm : 9.10 Tolerance mm : +- 0.10 Rated speed rpm : 100 CRT mm min. :> 19.50 Testing: Rated speed rpm : 325 rack travel mm : 9.60 Tolerance mm : +- 0.10 rack travel mm : 2.00 Rated speed rpm : 605
pre-tension click setting x : 3.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 87.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 3.0 Spreed	rack travel mm : 9.10 Tolerance mm : +- 0.10 Rated speed rpm : 100 CRT mm min. :> 19.50 Testing: Rated speed rpm : 325 rack travel mm : 9.60 Tolerance mm : +- 0.10 rack travel mm : 2.00
pre-tension click setting x : 3.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 87.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0	rack travel mm : 9.10 Tolerance mm : +- 0.10 Rated speed rpm : 100 CRT mm min. :> 19.50 Testing: Rated speed rpm : 325 rack travel mm : 9.60 Tolerance mm : +- 0.10 rack travel mm : 2.00 Rated speed rpm : 605

Rated speed rpm : 500 rack travel mm : 14.20 Tolerance mm : + 0.10 Rated speed rpm : 750 rack travel mm : 13.90 Tolerance mm : + 0.10 ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500 Pressure hPa : 1400
rack travel mm : 14.20
Tolerance mm : + 0.10

Rated speed rpm : 500 : Pressure hPa rack travel mm : 13.30
Tolerance mm : + 0.10

MEASUREMENT

Rated speed rpm : 500

Pressure hPa : 300 rack travel mm : 13.70 Tolerance mm : + 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure hPa Rated speed rpm : 750 Del. quantity cm3/1000 strokes : 85.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : +- 3.0 Spreed Tolerance cm3/1000 sci Check tolerance cm3/1000 strokes : 6.0

Aneroid pressure hPa 500 Rated speed rpm :

Del. quantity cm3/1000 strokes : 68.0

8.0

Tolerance cm3/1000 strokes : +- 2.0Check tolerance cm3/1000s. : +- 4.0

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.25 Tolerance mm : +- 0.75 Del. quantity cm3/1000 strokes : 120.0 Tolerance cm3/1000 strokes : +- 7.5

Check tolerance cm3/1000s. : +- 10.0

LOW IDLE

Rated speed rpm : 325 Rack travel in mm: 9.60 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 14.0 Tolerance cm3/1000 strokes : +- 2.0theck tolerance cm3/1000s. : +- 4.5 Spreed Tolerance cm3/1000 strokes : 5.5 Check tolerance : 9.0 cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 02.08.97 Edition : ISO 4113 Test oil

Combination No. : 0 400 864 104

Injection pump

Pump designation : PES4A95D410/3RS2789

EP type number : 0 410 894 995

Governor

Governer design. : RSV325...1250A5C877L

: 0 420 232 632 Governer no.

Cust. part No. : 0423 2047 KY

Customer-spec. information Customer : KHD-DMI Motor : BF4L 913 C : 78.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C 40 Tolerance °C : +- 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

: 173.5 bar Tolerance bar

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm 3.00 : +- 0.05 Tolerance mm

Check

: +- 0.10 tolerance mm

Rack travel in mm: 10.50 Tolerance mm : \leftarrow 1.50

Firing order : 1- 3- 4- 2

: 0-90-180-270 Phasing : +- 0.50

Tolerance

Check

tolerance °NW : **←** 0.75

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm: 12.70 : +- 0.05 Tolerance mm

Del. quantity

cm3/1000 strokes : 92.0

Tolerance

cm3/1000 strokes : +-1.0

Check tolerance cm3/1000s. : +-3.0

Spreed

Tolerance cm3/1000 strokes : 3.5	theck tolerance cm3/1000s. : 8.0
Check tolerance cm3/1000s. : 8.0	
	+ CONTROL LEVER
Rated speed rpm : 325	+ control lever + position degree : 104.0 + tolerance degree : +- 4.0
Rack travel in mm : 8.50	+
Tolerance num : + 0.10	+ RATED SPEED
Del. quantity	rack travel mm : 11.70
cm3/1000 strokes : 11.5 Tolerance	+ Rated speed rpm : 1295 + Tolerance 1/min : +- 5
cm3/1000 strokes : +- 2.0	Toterance minima.
Check tolerance	rack travel mm : 4.00
cm3/1000s. : + 4.5	+ Rated speed rpm : 1355
Spreed	† Tolerance 1/min : +- 15
Tolerance	†
cm3/1000 strokes : 5.5	+ rack travel mm : 0.85 + Tolerance mm : +- 0.55
Check tolerance cm3/1000s. : 9.0	+ Rated speed rpm : 1555
. 7.0	Rated Speed (pill : 1999
	rack travel mm : 4.00
(B) SETTING OF INJECTION PUMP	+ Rated speed rpm : 1405
WITH GOVERNOR	† Tolerance 1/min : +- 15
	†
	<u>†</u>
GUIDE SLEEVE POSITION	
0222 022272 (00272017	LOW IDLE
	T.
control Lever	+
position degree : FREE	control lever
· · · · · · · · · · · · · · · · · · ·	position degree : 70.0
position degree : FREE Rated speed rpm : 800	
position degree : FREE	position degree : 70.0
position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20	position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring
position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring	position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325
position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension	position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring
position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring	position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00 Tolerance mm : +- 0.10
position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : +- 0.20 governor spring pre-tension click setting x : 3.50	position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00
position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension	position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00 Tolerance mm : +- 0.10 Rated speed rpm : 100
position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.50 FULL LOAD DELIVERY AT FULL LOAD STOP	position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00 Tolerance mm : +- 0.10
position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250	position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00 Tolerance mm : +- 0.10 Rated speed rpm : 100 CRT mm min. : > 19.50
position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.50 FULL LOAD DELIVERY AT FULL LOAD STOP	position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00 Tolerance mm : +- 0.10 Rated speed rpm : 100
position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : - Del. quantity	position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00 Tolerance mm : +- 0.10 Rated speed rpm : 100 CRT mm min. : > 19.50 Testing: Rated speed rpm : 325
position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 92.0	position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00 Tolerance mm : +- 0.10 Rated speed rpm : 100 CRT mm min. : > 19.50 Testing: Rated speed rpm : 325 rack travel mm : 325 rack travel mm : 8.50
position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 92.0 Tolerance	position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00 Tolerance mm : +- 0.10 Rated speed rpm : 100 CRT mm min. : > 19.50 Testing: Rated speed rpm : 325
position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : +- 0.20 governor spring pre-tension click setting x : 3.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 92.0 Tolerance cm3/1000 strokes : +- 1.0	position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00 Tolerance mm : +- 0.10 Rated speed rpm : 100 CRT mm min. : > 19.50 Testing: Rated speed rpm : 325 rack travel mm : 8.50 Tolerance mm : +- 0.10
position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : +- 0.20 governor spring pre-tension click setting x : 3.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 92.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance	position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00 Tolerance mm : +- 0.10 Rated speed rpm : 100 CRT mm min. : > 19.50 Testing: Rated speed rpm : 325 rack travel mm : 8.50 Tolerance mm : +- 0.10 rack travel mm : 2.00
position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 92.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0	position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00 Tolerance mm : +- 0.10 Rated speed rpm : 100 CRT mm min. : > 19.50 Testing: Rated speed rpm : 325 rack travel mm : 8.50 Tolerance mm : +- 0.10 rack travel mm : 2.00 Rated speed rpm : 580
position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 92.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0 Spreed	position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00 Tolerance mm : +- 0.10 Rated speed rpm : 100 CRT mm min. : > 19.50 Testing: Rated speed rpm : 325 rack travel mm : 8.50 Tolerance mm : +- 0.10 rack travel mm : 2.00
position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : +- 0.20 governor spring pre-tension click setting x : 3.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 92.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 3.0	position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00 Tolerance mm : +- 0.10 Rated speed rpm : 100 CRT mm min. : > 19.50 Testing: Rated speed rpm : 325 rack travel mm : 8.50 Tolerance mm : +- 0.10 rack travel mm : 2.00 Rated speed rpm : 580 Tolerance 1/min : +- 30
position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : +- 0.20 governor spring pre-tension click setting x : 3.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 92.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 3.0 Spreed Tolerance	position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00 Tolerance mm : +- 0.10 Rated speed rpm : 100 CRT mm min. : > 19.50 Testing: Rated speed rpm : 325 rack travel mm : 8.50 Tolerance mm : +- 0.10 rack travel mm : 2.00 Rated speed rpm : 580

Rated speed rpm : 1250 rack travel mm : 12.70 : ← 0.05 Tolerance mm

Rated speed rpm : 500

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.25
Tolerance mm : + 0.75 Del. quantity

cm3/1000 strokes : 130.0

Tolerance

cm3/1000 strokes : +- 7.5

Check tolerance

cm3/1000s. : +- 10.0

LOW IDLE

Rated speed rpm : 325

Rack travel in mm: 8.50 Tolerance mm : + 0.10 Del. quantity

cm3/1000 strokes : 11.5

Tolerance

cm3/1000 strokes : +- 2.0

Check tolerance

cm3/1000s. **: ←** 4.5

Spreed

Tolerance

cm3/1000 strokes : 5.5

Check tolerance

9.0 cm3/1000s.

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... Edition : 05.08.97 Test oil : ISO 4113 : 0 400 864 105 Combination No. Injection pump Pump designation : PES4A95D410/3RS2789 : 0 410 894 995 EP type number Governor Governer design. : RSV325...900A1c878L Governer no. : 0 420 232 633 Cust. part No. : 0423 2062 KY Customer-spec. information Customer : KHD-DMI Motor : BF4L 913 Power KW 64.0 TEST BENCH REQUIREMENTS Inlet line : 3.1 Test oil inlet temp. °C 40 Tolerance *C : +- 2.0 Overflow valve : 1 419 992 198 Inlet press. bar : 1.5 Test nozzle holde : 0 681 343 009 assembly Opening pressure bar 173.5 Tolerance bar

: 1 680 750 014

6.0

x inside diameter x length mm	: 2.0 : 600
REMARKS	
(A) INJECTION PUMF Set equal delivery per values	
BEGINNING OF DELIV	/ERY
Test pressure bar Tolerance bar	: 26.0 : +- 1.0
Prestroke mm Tolerance mm Check	: 3.00 : + 0.05
tolerance mm	: +- 0.10
Rack travel in mm Tolerance mm	: 10.50 : +- 1.50
Firing order	: 1-3-4-2
Phasing Tolerance Check tolerance *NW	: 0-90-180-270 : +- 0.50 : +- 0.75
BASIC SETTING Rated speed rpm	: 850
Rack travel in mm	: 13.30
Del. quantity cm3/1000 strokes	: 92.0
Tolerance cm3/1000 strokes	: + 1.0
Check tolerance cm3/1000s.	: +- 3.0
Spreed	

Test lines

Outside diameter :

Tolerance	+
cm3/1000 strokes : 3.5	+
	ļ
Check tolerance	CONTROL LEVER
cm3/1000s. : 8.0	
. 0.0	- control lever
and the second s	
700	tolerance degree : +- 4.0
Rated speed rpm : 325	†
	+ RATED SPEED
Rack travel in mm: 8.20	+ rack travel mm : 12.30
Del. quantity	+ Rated speed rpm : 895
cm3/1000 strokes : 11.5	+ Tolerance 1/min : +- 5
Tolerance	1
cm3/1000 strokes : +- 2.0	rack travel mm : 4.00
	The state of the s
Check tolerance	The second secon
cm3/10G0s. : :- 4.5	Tolerance 1/min : +- 10
Spreed	†
Tolerance	+ rack travel mm : 0.85
cm3/1000 strokes : 5.5	+ Tolerance mm : +- 0.55
Check tolerance	+ Rated speed rpm : 1090
cm3/1000s. : 9.0	1
, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	rack travel mm : 4.00
(D) OFTTING OF THEFTTON DUMP	Rated speed rpm : 955
(B) SETTING OF INJECTION PUMP	†
WITH GOVERNOR	†
	+
	+
	+ LOW IDLE
GUIDE SLEEVE POSITION	+
	}
	+ control lever
control lever	position degree : 67.0
position degree : FREE	tolerance degree : +- 4.0
	T total dive degree 4.5
Rated speed rpm : 800	Cotting point when hymne and
2.50	Setting point w/out bumper spring
Rack travel in mm : 0.50	†
Tolerance mm : + 0.20	+ Rated speed rpm : 325
	rack travel mm : 7.70
governor spring	+ Tolerance mm : + 0.10
pre-tension	1
	Rated speed rom · 100
click setting x : 2.25	Rated speed rpm : 100
click setting x : 2.25	+
	Rated speed rpm : 100 CRT mm min. : > 19.50
FULL LOAD DELIVERY AT FULL LOAD STOP	+ CRT mm min. : > 19.50
FULL LOAD DELIVERY AT FULL LOAD STOP	+
	CRT mm min. :> 19.50 Testing:
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 850	CRT mm min. :> 19.50 Testing:
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 850 Aneroid pressure	CRT mm min. :> 19.50 Testing: Rated speed rpm : 325
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 850 Aneroid pressure hPa : -	CRT mm min. :> 19.50 Testing: Rated speed rpm : 325
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 850 Aneroid pressure hPa : - Del. quantity	CRT mm min. : > 19.50 Testing: Rated speed rpm : 325 rack travel mm : 8.20
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 850 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 92.0	CRT mm min. : > 19.50 Testing: Rated speed rpm : 325 rack travel mm : 8.20 rack travel mm : 2.00
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 850 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 92.0 Tolerance	CRT mm min. : > 19.50 Testing: Rated speed rpm : 325 rack travel mm : 8.20 rack travel mm : 2.00 Rated speed rpm : 415
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 850 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 92.0 Tolerance cm3/1000 strokes : +- 1.0	CRT mm min. : > 19.50 Testing: Rated speed rpm : 325 rack travel mm : 8.20 rack travel mm : 2.00
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 850 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 92.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance	CRT mm min. : > 19.50 Testing: Rated speed rpm : 325 rack travel mm : 8.20 rack travel mm : 2.00 Rated speed rpm : 415
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 850 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 92.0 Tolerance cm3/1000 strokes : +- 1.0	CRT mm min. : > 19.50 Testing: Rated speed rpm : 325 rack travel mm : 8.20 rack travel mm : 2.00 Rated speed rpm : 415
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 850 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 92.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 3.0	CRT mm min. : > 19.50 Testing: Rated speed rpm : 325 rack travel mm : 8.20 rack travel mm : 2.00 Rated speed rpm : 415
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 850 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 92.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0 Spreed	CRT mm min. : > 19.50 Testing: Rated speed rpm : 325 rack travel mm : 8.20 rack travel mm : 2.00 Rated speed rpm : 415 Tolerance 1/min : + 30 TORQUE CONTROL
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 850 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 92.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance	CRT mm min. : > 19.50 Testing: Rated speed rpm : 325 rack travel mm : 8.20 rack travel mm : 2.00 Rated speed rpm : 415 Tolerance 1/min : + 30 TORQUE CONTROL Rated speed rpm : 850
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 850 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 92.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance cm3/1000 strokes : 3.5	CRT mm min. : > 19.50 Testing: Rated speed rpm : 325 rack travel mm : 8.20 rack travel mm : 2.00 Rated speed rpm : 415 Tolerance 1/min : + 30 TORQUE CONTROL
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 850 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 92.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance	CRT mm min. : > 19.50 Testing: Rated speed rpm : 325 rack travel mm : 8.20 rack travel mm : 2.00 Rated speed rpm : 415 Tolerance 1/min : + 30 TORQUE CONTROL Rated speed rpm : 850 rack travel mm : 13.30
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 850 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 92.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance cm3/1000 strokes : 3.5	CRT mm min. : > 19.50 Testing: Rated speed rpm : 325 rack travel mm : 8.20 rack travel mm : 2.00 Rated speed rpm : 415 Tolerance 1/min : + 30 TORQUE CONTROL Rated speed rpm : 850

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.25
Tolerance mm : + 0.75
Del. quantity
cm3/1000 strokes : 130.0
Tolerance
cm3/1000 strokes : + 7.5
Check tolerance

LOW IDLE

cm3/1000s.

Rated speed rpm : 325 8.20 Rack travel in mm: Del. quantity cm3/1000 strokes : 11.5 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : +- 4.5 Spreed Tolerance cm3/1000 strokes : 5.5 Check tolerance 9.0 cm3/1000s.

: + 10.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 31.07.97 Edition Test oil : ISO 4113

Combination No. : 0 400 876 440

Injection pump

Pump designation : PES6A90D410RS2757 EP type number : 0 410 896 086

Governor

Governer design. : RSV425...1075A1C2266

: -2L

Governer no. : 0 420 232 640

Cust. part No. : 99459159

Customer-spec. information Customer : IVECO-FIAT : 8065, 25, 085 Motor

Power KW : 104.0

TEST BENCH REQUIREMENTS

Inlet line : 1.3

Test oil inlet

: 40 : +- 2.0 temp. °C Tolerance °C

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

: 173.5 : + 1.5 bar Tolerance bar

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 2.30 Tolerance mm : +- 0.05 Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300 Tolerance : +- 0.50

Check

tolerance $^{\circ}NW$: +- 0.75

BASIC SETTING

Rated speed rpm : 1075

Rack travel in mm: 12.90 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 102.0

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Check tolerance cm3/1000s. : +- 3.0	+ Check tolerance - cm3/1000s. : +- 3.0 - Spreed
Spreed	+ Tolerance + cm3/1000 strokes : 3.5
Tolerance cm3/1000 strokes : 3.5	Check tolerance cm3/1000s. : 8.0
Check tolerance cm3/1000s. : 8.0	CONTROL 4 EVER
	+ CONTROL LEVER
Rated speed rpm : 425	control lever position degree : 106.0 tolerance degree : +- 4.0
Rack travel in mm: 7.50	+
Tolerance mm : + 0.10	+ RATED SPEED
Del. quantity cm3/1000 strokes : 13.0	rack travel mm : 11.90 Rated speed rpm : 1120
Tolerance	Tolerance 1/min : +- 5
am3/1000 strokes : + 2.0	+
Check tolerance	rack travel mm : 4.00
cm3/1000s. : +- 4.5	Rated speed rpm : 1165 Tolerance 1/min : + 15
Spreed Tolerance	+ Toterance Training : +- 13
cm3/1000 strokes : 5.5	rack travel mm : 0.85
Check tolerance	+ Tolerance mm : +- 0.55
cm3/1000s. : 9.0	Rated speed rpm : 1340
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	rack travel mm : 4.00 Rated speed rpm : 1190 Tolerance 1/min : +- 15
GUIDE SLEEVE POSITION	LOW IDLE
control lever position degree : - 3	control lever
Rated speed rpm : 800	<pre>position degree : 75.0 tolerance degree : + 4.0</pre>
Rack travel in mm : 0.50	+ total differ degree 4.0
Tolerance mm : +- 0.20	Setting point w/out bumper spring
governor enging	+ Rated speed rpm : 425
governor spring pre-tension	+ rack travel mm : 7.00
click setting x : 4.50	Tolerance mm : + 0.10
ELLI LOAD DELTUEDY AT ELLI LOAD CTOD	Rated speed rpm : 100
FULL LOAD DELIVERY AT FULL LOAD STOP	T + CRT mm min. :> 19.50
Rated speed rpm : 1075 Aneroid pressure	Testing:
hPa : 900	† B-A-1 (35
Del. quantity cm3/1000 strokes : 102.0	+ Rated speed rpm : 425
Tolerance	rack travel mm : 7.50 Tolerance mm : +- 0.10
cm3/1000 strokes : +- 1.0	+
	rack travel mm : 2.00

Rated speed rpm Tolerance 1/min		Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 68.0 Tolerance
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 12.90 : +- 0.05	cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 3.0
Rated speed rpm rack travel mm Tolerance mm	: 13.10	STARTING FUEL DELIVERY Rated speed rpm : 100
ANEROID/ALTITUDE COMPENSATOR TEST		rack travel mm : 20.25 Tolerance mm : + 0.75 Del. quantity cm3/1000 strokes : 84.0 Tolerance cm3/1000 strokes : +- 7.5
Rated speed rpm Pressure hPa rack travel mm Tolerance mm		- cm3/1000 strokes : +- 7.5 - Check tolerance - cm3/1000s. : +- 10.0
Rated speed rpm Pressure hPa	: -	+ LOW IDLE
rack travel mm Tolerance mm	: 11.30 : + 0.10	+ Rated speed rpm : 425
MEASUREMENT		+ Rack travel in mm : 7.50 + Tolerance mm : + 0.10
Rated speed rpm	: 500	+ Del. quantity + cm3/1000 strokes : 13.0
ressure hPa ack travel mm	: 430 : 12.20	+ Tolerance + cm3/1000 strokes : +- 2.0 + Check tolerance
Tolerance mm	: + 0.10	+ cm3/1000s. : +- 4.5 + Spreed
Pressure hPa rack travel mm Tolerance mm	: 500 : 12.55 : + 0.05	Tolerance cm3/1000 strokes : 5.5 Check tolerance cm3/1000s. : 9.0
FUEL DELIVERY CHA	RACTERISTICS	
Aneroid pressure hPa Rated speed rpm Del. quantity	: 900 : 700	End of test specification sheet
cm3/1000 strokes Tolerance cm3/1000 strokes		† †
Check tolerance cm3/1000s.	: ← 4.0	‡
Aneroid pressure hPa	: -	‡

J02

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 13.06.95 Test oil : ISO 4:13

Combination No. : 0 400 866 189

Injection pump

Pump designation : PES6A100b320/3RS2691

EP type number : 9 410 230 025

Governor

Governer design. : RSV400...1100A0C2190

: -65R

Governer no. : 0 420 233 304

Cust. part No. : 3921145

Customer—spec. information

Customer : CDC Motor : 6 CT

: 6 CTA 8.3ltr

Power KW : 174.5

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C

Tolerance *C

Overflow valve : 1 417 413 047

Inlet press. bar :

1.5

Tolerance bar : + 0.1

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

bar

: 208.5

Tolerance bar : + 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter:

2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm : 2.85
Tolerance mm : +- 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50Tolerance mm : + 1.50

Firing order : 1-5- 3- 6- 2-

: 0-60-120-180-240 Phasing

: -300

Start of delivery blocking

*NW after s.o.d. : 11.00 Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 12.75

Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes : 129.0	- - control lever - position degree : 95.0
Tolerance cm3/1000 strokes : + 1.0	tolerance degree : +- 4.0
Check tolerance cm3/1000s. : + 3.0	- RATED SPEED - rack travel mm : 11.70 - Rated speed rpm : 1145 - Tolerance 1/min : +- 5
Spreed	•
Tolerance cm3/1000 strokes : 4.0	- rack travel mm : 4.00 - Rated speed rpm : 1215 - Tolerance 1/min : +- 5
Check tolerance cm3/1000s. : 6.5	- rack travel mm : 0.85 - Tolerance mm : +- 0.55 - Rated speed rpm : 1300
Rack travel in mm: 5.60 Tolerance mm: + 0.10	rack travel mm : 4.00 - Rated speed rpm : 1220 - Tolerance 1/min : +- 15
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	LOW IDLE
GUIDE SLEEVE POSITION	control lever position degree : 74.0 tolerance degree : +- 4.0
control lever position degree : - 3 Rated speed rpm : 800	- Control lever difference - Grad : 21.0 - tolerance degree : +- 4.0
Rack travel in mm: 0.50 - Tolerance mm: + 0.20 - Tolerance mm: + 0.20	- Setting point w/out bumper spring
FULL LOAD DELIVERY AT FULL LOAD STOP	- Rated speed rpm : 400 - rack travel mm : 5.10 - Tolerance mm : +- 0.10
Rated speed rpm : 1100 Aneroid pressure	- Rated speed rpm : 100
hPa : -	- CRT mm min. : > 19.00
Del. quantity cm3/1000 strokes : 129.0 - Tolerance -	- Testing:
cm3/1000 strokes : +- 1.0	- Rated speed rpm : 400
Check tolerance cm3/1000s. : +- 3.0 Spreed	- rack travel mm : 5.60 - Tolerance mm : +- 0.10
Tolerance - cm3/1000 strokes : 4.0	TORQUE CONTROL
Check tolerance cm3/1000s. : 6.5	Rated speed rpm : 1100 - rack travel mm : 12.75 - Tolerance mm : +- 0.05
	<u>-</u>

CONTROL LEVER

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.00
Tolerance mm : + 1.00
Del. quantity

cm3/1000 strokes : 155.0

Tolerence

cm3/1000 strokes : \leftarrow 10.0

Check tolerance

cm3/1000s. : +- 15.0

LOW IDLE

Rack travel in mm : 5.60 Tolerance mm : + 0.10

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 31.07.97 Edition : ISO 4113 Test oil

Combination No. : 0 402 196 705

Injection pump

Pump designation : PES6P120A720RS3347

EP type number : 0 412 026 777

Governor

Governer design. : RE30

: 0 421 890 029 Governer no.

Cust. part No. : RE 63514

Customer-spec. information

Customer : DEERE

Motor : 6076 HRW35

Power KW : 181.0

TEST BENCH REQUIREMENTS

: 4.2 Inlet line

Test oil inlet

temp. °C 40 : +- 2.0 Tolerance °C

Overflow valve : 2 417 413 077

Inlet press. bar : 1.5 : +- 0.1 Tolerance bar

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 Tolerance bar : +- 1.5

: 1 680 750 015 Test lines

Outside diameter : 6.0 x inside diameter : 3.0 : 600 x length mm

REMARKS

Pump-specific values in Section (B) must be observed!

(A) INJECTION PUMP SETTINGS

No basic setting.

Setting of constant delivery

under Section C.

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : +- 1.0

Prestroke mm 3.60 : +- 0.05 Tolerance mm Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

: +- 0.75 tolerance *NW

Start of delivery blocking

*NW after s.o.d. : 10.50

Tolerance : \leftarrow 0.50

Check

: **←** 0.75 tolerance *NW

Barrel no. : 1

(B) POSITIONER TEST Warm-up time: 3 mir n=600 min-1, Uact =	nutes at
TESTING & SETTING F	RACK TRAVEL SENSOR
Engine speed min-1:	: 0
Setting point (P, R and H pump)	
Check	: 3.100 : 13.00 : +/- 0.05 : +/- 0.10
Check value (P, R and H pump)	
Check	: 1.700 : 6.15 : +/- 0.25 : +/- 0.30
Setting point (M pump)	
Check	: 3.100 : 12.50 : +/- 0.05 : +/- 0.10
Check value (M pump)	
CRT mm Tolerance mm Check	: 1.700 : 5.50 : +/- 0.25 : +/- 0.30
Stop position	
	: Value with gised adjusting magnet and control rod in
CRT mm Tolerance mm Check	stop position. : 0.75 : +/- 0.25

ENGINE-SPEED SENSOR (All P and R pumps not H and M pumps) Test with control rod in stop position Engine speed min-1: 60 Amplitude V : 1.4 Tolerance V : +/- 0.6 Check tolerance V : +/- 1.20 Erigine speed min-1: 600 Difference Amplitude to Amplitude V : max.1.4 (C) INJECTION PUMP WITH POSITIONER TEST POINT V1 Rated speed rpm : 1100 Uact V : 2.710Del. quantity cm3/1000 strokes : 141.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. 9.0 FUEL DELIVERY CHARACTERISTICS

Rated speed rpm	: 700
Uact V	: 2.710
Del. quantity	
cm3/1000 strokes	: 142.0
Tolerance	
cm3/1000 strokes	: +- 3.0
Check tolerance	
cm3/1000s.	: +- 6.0
Spreed	
Tolerance	2.2
cm3/1000 strokes	: 8.0
Check tolerance	40.0
cm3/1000s.	: 12.0
TEAT DATE: 1.4	
TEST POINT L1	
Dakad assad ass	. /25
Rated speed rpm	: 425

Wact V: 1.400

tolerance mm : +/- 0.35

Tolerance Volt : **←** 0.060

Check tolerance

: +- 0.060 Volt

Del. quantity

cm3/1000 strokes : 19.0

Tolerance

cm3/1000 strokes : \leftarrow 3.0

Spreed

Tolerance

cm3/1000 strokes : 6.0

Check tolerance

cm3/1000s.10.0

STARTING FUEL DELIVERY

Rated speed rpm 100 4.600 Uact V

Del. quantity cm3/1000 strokes : 100.0

Tolerance

cm3/1000 strokes : +- 10.0

Check tolerance

cm3/1000s.: **←** 13.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 04.08.97 Edition : ISO 4113 Test cil

Combination No. : 0 402 736 848

Injection pump

Pump designation : PES6P12OA12ORS7314 EP type number : 0 412 726 901

Governor

Governer design. : RQV400...1250PA964

: -23K

: 0 421 815 374 Governer no.

Cust. part No. : 3921922

Customer-spec. information Customer : CDC Motor : 6BTA-A Power KW : 142.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C 40 Tolerance °C

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 103 assembly

Opening pressure

: 208.5 bar Tolerance bar

Test Lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter : 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : +- 1.0

Prestroke mm : +-3.60 : +- 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 12.50 Tolerance mm : \leftarrow 0.50

: 1-5- 3- 6- 2-Firing order

: 0-60-120-180-240 Phasing

: -300

: +- 0.50 Tolerance

Check

tolerance *NW : +- 0.75

Start of delivery blocking

*NW after s.o.d. : 5.75 : +- 0.50 Tolerance

Check

: +- 0.75 tolerance *NW

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1150

Rack travel in mm: 14.00

Tolerance mm : + 0.05 +	
Del. quantity cm3/1000 strokes : 169.5	CONTROL LEVER
Tolerance cm3/1000 strokes : + 1.0	<pre>control lever position degree : 116.5 tolerance degree : +- 6.0</pre>
Check tolerance cm3/1000s. : + 4.0	RATED SPEED rack travel mm : 13.00
Spreed	Rated speed rpm : 1300 Tolerance 1/min : +- 15 Check
Tolerance cm3/1000 strokes : 8.0	speed 1/min : +- 20
Check tolerance cm3/1000s. : 12.0	rack travel mm : 4.00 Rated speed rpm : 1465 Tolerance 1/min : +- 5 Check speed 1/min : +- 10
Rated speed rpm : 420	rack travel mm : 0.50 Tolerance mm : +- 0.50
Rack travel in mm: 5.70 Tolerance mm: + 0.20 Del. quantity cm3/1000 strokes: 13.0	Rated speed rpm : 1550
Tolerance + 3.0 + Check tolerance + 5.0 + 5.0	LOW IDLE
Spreed +	control lever position degree : 73.0
cm3/1000 strokes : 4.0 + Check tolerance + cm3/1000s. : 8.0 +	tolerance degree : +- 6.0 Control lever difference
 	Grad : 43.5 tolerance degree : +- 6.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Setting point w/out bumper spring
	Rated speed rpm : 300
FULL LOAD DELIVERY AT FULL LOAD STOP	CRT mm min. :> 8.50
Rated speed rpm : 1150 + Aneroid pressure	Testing:
hPa : 1200 + Del. quantity +	Rated speed rpm : 420 rack travel mm : 5.70
cm3/1000 strokes : 169.5	Tolerance mm : + 0.20
cm3/1000 strokes : + 1.0 + Check tolerance +	Rated speed rpm : 420
cm3/1000s. : + 4.0 + 5preed	TORQUE CONTROL Rated speed rpm : 1150
Tolerance + cm3/1000 strokes : 8.0 + Check tolerance + cm3/1000 strokes : 8.0 + cm3/1000 strokes	rack travel mm : 14.00 Tolerance mm : +- 0.05
cm3/1000s. : 12.0	Rated speed rpm : 800

rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm	: ← 0.20 : 1250 : 13.90	Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0
ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa Rated speed rpm	: 1200	Aneroid pressure hPa : - Rated speed rpm : 1150 Del. quantity cm3/1000 strokes : 112.5 Tolerance cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000s. : +- 4.0
Pressure hPa rack travel mm Tolerance mm MEASUREMENT Rated speed rpm	: 11.25 : + 0.20 : 1150	STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 13.75 Tolerance mm : + 0.50 Del. quantity cm3/1000 strokes : 155.0 Tolerance cm3/1000 strokes : +- 20.0
Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm	: 13.15 : + 0.30 : 375 : 12.05	Check tolerance cm3/1000s. : +- 25.0
Start interlock		+ LOW IDLE + Rated speed rpm : 420
Rated speed rpm Rated speed rpm Check	: > 100 : < 315	Rack travel in mm: 5.70 Tolerance mm: + 0.20 Del. quantity cm3/1000 strokes: 13.0
speed 1/min Check speed 1/min	: > 80 : < 325	Tolerance cm3/1000 strokes : +- 3.0 Check tolerance cm3/1000s. : +- 5.0
FUEL DELIVERY CHA	ARACTERISTICS	+ Spreed + Tolerance + cm3/1000 strokes : 4.0 + Check tolerance
Aneroid pressure hPa Rated speed rpm Del. quantity		cm3/1000s. : 8.0
cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed		End of test specification sheet

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 30.07.97 Edition Test oil : ISO 4113

Combination No. : 0 402 736 867

Injection pump

Pump designation : PES6P120A120RS7350

EP type number : 0 412 726 921

Governor

Governer design. : RQV400...1150PA1172K

Governer no. : 0 421 815 438

Cust. part No. : 3928147,3934242(new)

Customer-spec. information : CDC Customer : 6BTA-A Motor

Power KW : 142.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C Tolerance °C : +- 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : Tolerance bar : \leftarrow 0.1

Test nozzle holde

: 1 688 901 103 assembly

Opening pressure

208.5 Tolerance bar

Test Lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 600 x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +- 1.0

Prestroke mm 3.60 : +- 0.05 Tolerance mm Check

: ← C.10 tolerance mm

Rack travel in mm : 12.50 Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

Start of delivery blocking

*NW after s.o.d. : 5.75 : +- 0.50 Tolerance

Check

tolerance 'NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1150

Rack travel in mm : 14.00 Tolerance mm : **←** 0.05

Del. quantity

cm3/1000 strokes : 167.5

		+	
Tolerance cm3/1000 strokes	: + 1.0	control lever position degree : 116. tolerance degree : +- 6.	
Check tolerance cm3/1000s.	: + 4.0	+ RATED SPEED	
Spreed		rack travel mm : 13.0 Rated speed rpm : 1300 Tolerance 1/min : +-	
Tolerance		+ Check	10
cm3/1000 strokes	; 8.0	= speed 1/min : +- 2	20
Check tolerance cm3/1000s.	: 12.0	rack travel mm : 4.0 Rated speed rpm : 1465 Tolerance 1/min : +- Check	5
Rated speed rpm	: 420	speed 1/min : +- 1	10
Dook troval to on	ı: 6.10	+ rack travel mm : 0.5 + Tolerance mm : +- 0.5	
Rack travel in mm Tolerance mm	: + 0.20	+ Rated speed rpm : 1550	
Del. quantity		+	
cm3/1000 strokes	: 13.0	+	
Tolerance cm3/1000 strokes	: +- 3.0	I	
Check tolerance	•	+ LOW IDLE	
cm3/1000s.	; - 5.0	+	
Spreed Tolerance		t control lever	
cm3/1000 strokes	: 4.0	position degree : 73.	.0
Check tolerance		+ tolerance degree : +- 6.	.0
cm3/1000s.	: 8.0	Control lever difference Grad: 43.	5
(B) SETTING OF IN WITH GOVERNOR	NECTION PUMP		.ó
WITH GOVERNOR		Setting point w/out bumper	spring
FULL LOAD DELIVER	Y AT FULL LOAD STOP	Rated speed rpm : 300	
		+ CRT mm min. :> 8.5	50
Rated speed rpm Aneroid pressure	: 1150	† + Testing:	
hPa	: 1200	+	
Del. quantity	4 (3 F	+ Rated speed rpm : 420	
cm3/1000 strokes Tolerance	: 167.5	+ rack travel mm : 6.7 + Tolerance mm : +- 0.7	
cm3/1000 strokes	: ← 1.0	+ 10001 00 11811	
Check tolerance		Rated speed rpm : 420	
cm3/1000s. Spreed	: +- 4.0	İ	
Tolerance		TORQUE CONTROL	
cm3/1000 strokes	: 8.0	+ Rated speed rpm : 1150	
Check tolerance	. 12.0	+ rack travel mm : 14.0	
cm3/1000s.	: 12.0	Tolerance mm : + 0.0	כנ
		Rated speed rpm : 800	
		+ rack travel mm : 12.0	
CONTROL LEVER		Tolerance mm : + 0.2	ZÜ
		Γ	

Rated speed rpm rack travel mm Tolerance mm	: 1250 : 14.00 : +- 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa	: 1150 : 1200
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 1150 : - : 10.95 : +- 0.20
MEASUREMENT	
Rated speed rpm	: 1150
Pressure hPa rack travel mm Tolerance mm	: 500 : 12.85 : + 0.30
Pressure hPa rack travel mm Tolerance mm	: 375 : 11.75 : +- 0.20
Start interlock	
Rated speed rpm Rated speed rpm	: > 100 : < 315
Check speed 1/min Check	: > 80
speed 1/min	: < 325
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity	: 1200 : 800
cm3/1000 strokes Tolerance	: 141.0
cm3/1000 strokes Check tolerance	: 3.0
cm3/1000s. Spreed Tolerance	: +- 6.0
cm3/1000 strokes Check tolerance	: 8.0
cm3/1000s.	: 12.0

				_
Aneroid pressure				•
hPa	:		_	
Rated speed rpm	:	1	1150	
Del. quantity			104 D	
cm3/1000 strokes Tolerance	:		106.0	
cm3/1000 strokes		+	2.0	
Check tolerance	•	•	2.0	
cm3/1000s.	:	+	4.0	
STARTING FUEL DELI	ΙVŧ	ERY		
Rated speed rpm	:		100	
rack travel mm	:		13.75	
Tolerance mm	:	+	0.50	
Del. quantity cm3/1000 strokes			155.0	
Tolerance	:		123.0	
cm3/1000 strokes	:	+-	20.0	
Check tolerance	•		20.0	
cm3/1000s.	:	+-	25.0	
LOW IDLE				
Rated speed rpm	:		420	
Rack travel in mm	:		6.10	
Tolerance mm	:	+-	0.20	
Del. quantity			4	
cm3/1000 strokes	:		13.0	
Tolerance cm3/1000 strokes		+-	3.0	
Check tolerance	•	•	5.0	
cm3/1000s.	:	+-	5.0	
Spreed				
Tolerance	_		/ 0	
cm3/1000 strokes Check tolerance	:		4.0	
cm3/1000s.	•		8.0	
CIID/ 10000 i	•		0.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 25.07.97 Edition Test oil : ISO 4113

Combination No. : 0 402 796 821

Injection pump

Pump designation : PES6P120A720RS7407

EP type number : 0 412 726 955

Governor

Governer design. : RE30

Governer no. : 0 421 890 017

Cust. part No. : RE 67492

Customer-spec, information Customer : DEERE Motor : 6101HZ013

Power KW : 260.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C 40 Tolerance °C 2.0

Overflow valve : 2 417 413 077

2.0 Inlet press. bar : Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 103 assembly

Opening pressure

208.5 Tolerance bar

: 1 680 750 089 Test lines

Outside diameter : 8.0 x inside diameter : 3.0 x length mm : 600

REMARKS

Pump-specific values in Section (B) must be observed!

(A) INJECTION PUMP SETTINGS No basic setting.

Setting of constant delivery

under Section C.

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : +- 1.0

Prestroke mm 3.60 : +- 0.05 Tolerance mm

Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50 : +- 0.50 Tolerance mm

: 1-5-3-6-2-Firing order

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

Start of delivery blocking

*NW after s.o.d. : 9.25 : + 0.50Tolerance

Check

tolerance *NW

: +- 0.75

: 1 Barrel no.

Beginning of delivery differende

and maximum rack

travel : 15.00

Difference • CS	: 3.75
(B) POSITIONER TE Warm-up time: 3 m n=600 min-1, Uact	inutes at
TESTING & SETTING POSITION	RACK TRAVEL SENSOR
Engine speed min-	1: 0
Setting point (P, R and H pump)	
Uact V CRT mm Tolerance mm Check	: 3.100 : 13.00 : +/- 0.05
	: +/- 0.10
Check value (P, R and H pump)	
Uact V CRT mm Tolerance mm Check tolerance mm	: 1.700 : 6.15 : +/- 0.25 : +/- 0.30
Setting point (M pump)	
Uact V CRT mm Tolerance mm Check	: 3.100 : 12.50 : +/- 0.05
tolerance mm Check value (M pump)	: +/- 0.10
Uact V CRT mm Tolerance mm Check tolerance mm	: 1.700 : 5.50 : +/- 0.25 : +/- 0.30
Stop position	
Uact V deene	: Value with rgised adjusting magnet

and control rod in stop position.
0.75

Tolerance mm : +/- 0.25 Check tolerance mm : +/- 0.35 ENGINE-SPEED SENSOR (All P and R pumps not H and M pumps) Test with control rod in stop position Engine speed min-1: Amplitude V 1.4 Tolerance V : +/- 0.6 Check : +/- 1.20 tolerance V Engine speed min-1: 600 Difference Amplitude to Amplitude V : max.1.4 (C) INJECTION PUMP WITH POSITIONER TEST POINT V1 Rated speed rpm : 1050 Uact V 3.030 Del. quantity cm3/1000 strokes : 213.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s.9.0 FUEL DELIVERY CHARACTERISTICS 700 Rated speed rpm Uact V 3.120 Del. quantity cm3/1000 strokes : 237.0 Tolerance cm3/1000 strokes : \leftarrow 3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. 12.0

TEST POINT L1

CRT mm

Rated speed rpm : 450 1.740 Uact V Tolerance Volt : +- 0.060 Check tolerance : +- 0.060 Volt Del. quantity cm3/1000 strokes : 26.0 Tolerance cm3/1000 strokes : +- 3.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. 10.0

STARTING FUEL DELIVERY

Rated speed rpm : 100
Uact V : 4.550
Del. quantity
cm3/1000 strokes : 120.0
Tolerance
cm3/1000 strokes : +- 20.0
Check tolerance
cm3/1000s. : +- 25.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 24.07.97 Edition : ISO 4113 Test oil

Combination No. : 0 402 796 823

Injection pump

Pump designation : PESSP120A720RS7356

EP type number : 0 412 726 919

Governor

Governer design. : RE30

Governer no. : 0 421 890 017

Cust. part No. : RE 67884

Customer-spec. information Customer : DEERE

Motor : 6081 HRW 05

Power KW : 198.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C 40 Tolerance *C : +- 2.0

Overflow valve : 2 417 413 077

Inlet press. bar : 2.0 : + 0.1 Tolerance bar

Test nozzle holde

: 1 688 901 103 assembly

Opening pressure

208.5 bar : ← 1.5 Tolerance bar

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm :

REMARKS

Pump-specific values in Section (B) must be observed!

(A) INJECTION PUMP SETTINGS No basic setting.

Setting of constant delivery

under Section C.

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : +- 1.0

Prestroke mm : 3.60 Tolerance mm : +- 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance *NW : +- 0.75

Start of delivery blocking

*NW after s.o.d. : 9.25

Tolerance : +- 0.50 Check tolerance $^{\bullet}NW$: + 0.75

Barrel no. : 1

Beginning of delivery differende

and maximum rack

: 15.00 travel

Difference * CS : 2.50 (B) POSITIONER TESTING Warm-up time: 3 minutes at n=600 min-1, Uact = 2.5 VTESTING & SETTING RACK TRAVEL SENSOR POSITION Engine speed min-1: Setting point (P, R and H pump) 3.100 Uact V CRT mm 13.00 Tolerance mm : +/- 0.05 Check tolerance mm : +/-0.10Check value (P, R and H pump) 1.700 Uact V 6.15 CRT mm Tolerance mm : +/- 0.25 Check : +/- 0.30 tolerance mm Setting point (amuq M) 3.100 Uact V : 3.100 : 12.50 CRT mm : +/- 0.05 Tolerance mm Check : +/- 0.10 tolerance mm Check value (qmuq M) 1.700 Uact V 5.50 CRT mm : +/- 0.25 Tolerance mm Check : +/- 0.30 tolerance mm Stop position : Value with Uact V deenergised adjusting magnet and control rod in

stop position.

0.75

Tolerance mm : +/- 0.25 Check tolerance mm : +/- 0.35 ENGINE-SPEED SENSOR (All P and R pumps not H and M pumps) Test with control rod in stop position Engine speed min-1: 60 Amplitude V : 1.4 Tolerance V : +/- 0.6 Check tolerance V : +/- 1.20 Engine speed min-1: 600 Difference Amplitude to Amplitude V : max.1.4 (C) INJECTION PUMP WITH POSITIONER TEST POINT V1 Rated speed rpm : 1050 3.030 Uact V Del. quantity cm3/1000 strokes : 213.0 Tolerance cm3/1000 strokes : \leftarrow 1.0 Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. 9.0 FUEL DELIVERY CHARACTERISTICS 700 Rated speed rpm : Uact V 3.120 Del. quantity cm3/1000 strokes : 237.0 Tolerance cm3/1000 strokes : \leftarrow 3.0 Check tolerance cm3/1000s. : +- 6.0 Spreed

8.0

12.0

CRT mm

450 Rated speed rpm 1.740 Uact V Tolerance Volt : +~ 0.060 Check tolerance : +- 0.060 Volt Del. quantity cm3/1000 strokes : 26.0 Tolerance cm3/1000 strokes : +-3.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. 10.0

STARTING FUEL DELIVERY

Rated speed rpm : 100 Uact V : 4.550 Del. quantity cm3/1000 strokes : 120.0 Tolerance

cm3/1000 strokes : + 20.0

Check tolerance

cm3/1000s. : + 25.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 31.07.97 Test oil : ISO 4113

Combination No. : F 002 AOZ 006

Injection pump

Pump designation : PES4A95D320/3RS2880

EP type number : 9 410 037 214

Governor

Governer design. : RSV475...1100A0C880R

Governer no. : F 002 A20 206

Cust. part No. : 3930154

Customer-spec. information Customer : CDC Motor : 4BT3.9 Power KW : 63.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. *C : 40 Tolerance *C : +- 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0
Tolerance bar : +- 0.1

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm : 2.45
Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-3-4-2

Phasing : 0-90-180-270

Start of delivery blocking

*NW after s.o.d. : 6.50 Tolerance : + 0.50

Check

tolerance *NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 11.80 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 97.5

Tolerance	+ Tolerance
cm3/1000 strokes : + 1.0	+ cm3/1000 strokes : +- 1.0
	+ Check tolerance
Check tolerance	+ cm3/1000s. : +- 3.0
cm3/1000s. : +- 3.0	Spreed
CIID/ 10003	+ Tolerance
Spreed	+ cm3/1000 strokes : 4.0
	+ Check tolerance
Tolerance	+ cm3/1000s. : 6.5
cm3/1000 strokes : 4.0	}
	1
Check tolerance	
cm3/1000s. : 6.5	+ CONTROL LEVER
(10)	1 CONTINUE BEVEN
	+ control lever
and the second second	+ position degree : 108.0
Rated speed rpm : 475	+
	+ RATED SPEED
Rack travel in mm: 5.65	+ rack travel mm : 10.80
Tolerance mm : + 0.10	Rated speed rpm : 1155
Del. quantity	+ Tolerance 1/min : +- 5
cm3/1000 strokes : 20.5	
- -	T
Tolerance	+ rack travel mm : 6.00
cm3/1000 strokes : +- 2.0	+ Rated speed rpm : 1220
Check tolerance	+ Tolerance 1/min : +- 5
$cm3/1000s$. : \leftarrow 4.5	+
Spreed	rack travel mm : 0.85
Tolerance	+ Tolerance mm : +- 0.55
cm3/1000 strokes : 6.0	Rated speed rpm : 1400
Check tolerance	Nated Speed 1 pill 1 1400
	T
cm3/1000s. : 8.0	rack travel mm : 6.00
	+ Rated speed rpm : 1220
	† Tolerance 1/min : +- 15
(B) SETTING OF INJECTION PUMP	+
WITH GOVERNOR	+
	+
	+ LOW IDLE
GUIDE SLEEVE POSITION	+
	+
	+ control lever
control lever	position degree : 89.0
position degree : - 3	
Rated speed rpm : 800	T Control lever difference
Rated speed rpm : ooo	
	+ Grad : 19.0
Rack travel in mm: 0.50	tolerance degree : +- 4.0
Tolerance mm : +- 0.20	+
	Setting point w/out bumper spring
governor spring	+
pre-tension	Rated speed rpm : 475
click setting x : 5.00	rack travel mm : 5.15
ctick secting v . 7.00	+ rack travel mm : 5.15 + Tolerance mm : + 0.10
	T Total and T U.IU
PULL AGE DE TUENT AT PULL AGE ATA	T panel and and and
FULL LOAD DELIVERY AT FULL LOAD STOP	+ Rated speed rpm : 100
	†
Rated speed rpm : 1100	+ CRT mm min. :> 19.00
Aneroid pressure	+
hPa : -	↓ Testing:
Del. quantity	1
cm3/1000 strokes : 97.5	Rated speed rpm : 475
CIIID/ FUUU SUFUKES : 71.3	T varied sheed thin . 413

rack travel mm : 5.65
Tolerance mm : +- 0.10

TORQUE CONTROL
Rated speed rpm : 1100
rack travel mm : 11.80

Rated speed rpm : 1100 rack travel mm : 11.80 Tolerance mm : + 0.05

Rated speed rpm : 750 rack travel mm : 12.10 Tolerance mm : +- 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure hPa : -Rated speed rpm : 750

Del. quantity

cm3/1000 strokes : 100.5

Tolerance

cm3/1000 strokes : \leftarrow 2.0

Check tolerance

cm3/1000s. : ← 4.0

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.50
Tolerance mm : + 0.50
Del. quantity

cm3/1000 strokes : 122.0 Tolerance

Toterance

cm3/1000 strokes : \leftarrow 10.0

Check tolerance

cm3/1000s. : \leftarrow 15.0

LOW IDLE

Rated speed rpm : 475

Rack travel in mm : 5.65
Tolerance mm : + 0.10
Del. quantity

cm3/1000 strokes : 20.5

Tolerance

cm3/1000 strokes : +- 2.0

Check tolerance

cm3/1000s. : +- 4.5

Spreed

Tolerance

cm3/1000 strokes : 6.0

Check tolerance

cm3/1000s. : 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 31.07.97 Test oil : ISO 4113

Combination No. : F 002 A0Z 071

Injection pump

Pump designation : PES6A95D320/3RS2928

EP type number : F 002 A10 019

Governor

Governer design. : RSV450...900A4C949R

Governer no. : F 002 A20 247

Cust. part No. : 3933099

Customer-spec. information Customer : CDC : 6CT 8.3 Motor : 104.3 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : +- 2.0 Tolerance °C

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0
Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

: 208.5 Tolerance bar : +- 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar: 17.0 Tolerance bar : + 1.0

Prestroke mm : 2.85 Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

Firing order : 1- 5- 3- 6- 2-

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance *NW : +- 0.75

Start of delivery blocking

*NW after s.o.d. : 7.00

: +- 0.50 Tolerance

Check

tolerance °NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 900

Rack travel in mm: 11.85 Tolerance mm : + 0.05

1	- Aneroid pressure
Del. quantity	- hPa : -
cm3/1000 strokes : 109.0	- Del. quantity
	- cm3/1000 strokes : 109.0
Tolerance	- Tolerance
cm3/1000 strokes : + 1.0	- cm3/1000 strokes : +- 1.0
Check tolerance	- Check tolerance - cm3/1000s. : +- 3.0
cm3/1000s. : + 3.0	- Spreed
	- Tolerance
Spreed	- cm3/1000 strokes : 4.0
+	- Check tolerance
Tolerance +	- cm3/1000s. : 6.5
cm3/1000 strokes : 4.0	-
Check tolerance	
cm3/1000s. : 6.5	- CONTROL LEVER
	<u> </u>
+	- control lever
125	position degree : 108.5
Rated speed rpm : 425	tolerance degree : +- 4.0
Rack travel in mm: 9.00	- - RATED SPEED
Tolerance mm : + 0.10	rack travel mm : 10.80
Del. quantity	- Rated speed rpm : 945
cm3/1000 strokes : 32.0	Tolerance 1/min : +- 5
Tolerance	-
cm3/1000 strokes : + 2.0	rack travel mm : 4.00
Check tolerance	Rated speed rpm : 995
cm3/1000s. : +- 4.5	Folerance 1/min : +- 5
Spreed Tolerance	rack travel mm : 0.85
cm3/1000 strokes : 6.0	- Tolerance mm : +- 0.55
Check tolerance	Rated speed rpm : 1050
cm3/1000s. : 8.0	-
†	rack travel mm : 4.00
(B) OF THE OF THE OTHER	Rated speed rpm : 1000
(B) SETTING OF INJECTION PUMP	- Tolerance 1/min : +- 5
WITH GOVERNOR	_
-	
GUIDE SLEEVE POSITION	LOW IDLE
1	
control lever	- control lever
position degree : - 3	position degree : 88.0
Rated speed rpm : 800	tolerance degree : + 4.0
	-
Rack travel in mm: 0.50	Control lever difference
Tolerance mm : +- 0.20	- Grad : 20.5
	tolerance degree : +- 6.0
governor spring pre-tension	<pre>Setting point w/out bumper spring</pre>
click setting x : 3.25	- Second bound whose souther spiritig
	- Rated speed rpm : 100
	•
FULL LOAD DELIVERY AT FULL LOAD STOP	CRT mm min. :> 19.00
000	- Tantina.
Rated speed rpm : 900	- Testing:

Rated speed rpm : 425 rack travel mm : 9.00 Tolerance mm : +- 0.10

TORQUE CONTROL

Rated speed rpm : 900 rack travel mm : 11.85 Tolerance mm : + 0.05

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : + 0.50

Del. quantity

cm3/1000 strokes : 119.0

Tolerance

cm3/1000 strokes : \leftarrow 10.0

Check tolerance

cm3/1000s. : +- 15.0

LOW IDLE

Rated speed rpm : 425

Rack travel in mm: 9.00
Tolerance mm: +- 0.10
Del. quantity
cm3/1000 strokes: 32.0
Tolerance

cm3/1000 strokes : +- 2.0

Check tolerance

cm3/1000s. : + 4.5

Spreed

Tolerance

cm3/1000 strokes : 6.0

Check tolerance

cm3/1000s. : 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : ISO 4113

Combination No. : 0 400 866 214

Injection pump

Pump designation : PES6A100D320/3RS2691

: -4

EP type number : 9 410 230 030

Governor

Governer design. : RSV450...1100A0c2190

: -34R

Governer no. : 0 420 233 323

Cust. part No. : 3921095

Customer-spec. information Customer : CDC : 6CT830 Motor

Power KW

: 134.2

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C

40

Tolerance °C : + 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 1.5

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

har

: 208.5

Tolerance bar : + 1.5

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter :

x length mm : 600

2.0

RFMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : +- 1.0

Prestroke mm : 2.85 Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : \leftarrow 1.50

Firing order : 1-5-3-6-2-: 4

: 0-60-120-180-240 Phasing

: -300

Start of delivery blocking

*NW after s.o.d. : 11.00

Tolerance

: **←** 0.50

Check

tolerance *NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 11.25 Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 104.5	+ Aneroid pressure + hPa : - + Del. quantity
Tolerance cm3/1000 strokes : +- 1.0	cm3/1000 strokes : 104.5 Tolerance
Check tolerance cm3/1000s. : +- 3.0	+ cm3/1000 strokes : +- 1.0 + Check tolerance + cm3/1000s. : +- 3.0
Spreed	+ Spreed + Tolerance + cm3/1000 strokes : 4.0
Tolerance cm3/1000 strokes : 4.0	Check tolerance cm3/1000s. : 6.5
Check tolerance cm3/1000s. : 6.5	CONTROL LEVER
	+
Rated speed rpm : 450	<pre>+ control lever + position degree : 103.0 + tolerance degree : +- 4.0</pre>
Rack travel in mm : 5.80	+
Tolerance mm : +- 0.10 Del. quantity	+ RATED SPEED + rack travel mm : 10.20
cm3/1000 strokes : 18.5	Rated speed rpm : 1145
Tolerance	+ Tolerance 1/min : +- 5
cm3/1000 strokes : +- 2.0	poek simpled me
Check tolerance cm3/1000s. : + 4.5	+ rack travel mm : 4.00 + Rated speed rpm : 1225
Spreed	+ Tolerance 1/min : + 5
Tolerance	+
cm3/1000 strokes : 6.0 Check tolerance	+ rack travel mm : 0.85 + Tolerance mm : + 0.55
cm3/1000s. : 8.0	Rated speed rpm : 1300
	+
CON CETTANG OF THE COTTON CHAP	rack travel mm : 4.00
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	+ Rated speed rpm : 1230 + Tolerance 1/min : + 15 +
CUAR OF FUE DOSTITON	
GUIDE SLEEVE POSITION	LOW IDLE
control lever	+
position degree : - 3	+ control lever
Rated speed rpm : 800	<pre>position degree : 85.0 tolerance degree : + 4.0</pre>
Rack travel in mm : 0.50	-
Tolerance mm : +- 0.20	Control lever difference
governor spring	+ Grad : 18.0 + tolerance degree : + 4.0
pre-tension	+
click setting x : 4.25	Setting point w/out bumper spring
Pull 1000 DELTUROU AT THE 1000 OFFICE	Rated speed rpm : 450
FULL LOAD DELIVERY AT FULL LOAD STOP	rack travel mm : 5.30 Tolerance mm : + 0.10
Rated speed rpm : 1100	Rated speed rpm : 100

CRT mm min. : > 19.00 Testing: Rated speed rpm : 450 rack travel mm : 5.80 Tolerance mm : +- 0.10 TORQUE CONTROL Rated speed rpm : 1100 rack travel mm : 11.25 Tolerance mm : + 0.05 Rated speed rpm : 750 rack travel rmm : 12.10 Tolerance mm : + 0.10 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa Rated speed rpm : 750 Del. quantity cm3/1000 strokes : 113.5 Tolerance cm3/1000 strokes : +- 2.0Check tolerance cm3/1000s. : +- 4.0 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : $\leftarrow 0.50$ Del. quantity cm3/1000 strokes : 148.0 Tolerance cm3/1000 strokes : +- 10.0Check tolerance : +- 15.0 cm3/1000s. LOW IDLE Rated speed rpm : 450

Tolerance
cm3/1000 strokes : + 2.0
Check tolerance
cm3/1000s. : + 4.5
Spreed
Tolerance
cm3/1000 strokes : 6.0
Check tolerance
cm3/1000s. : 8.0

End of test specification sheet

K01

Del. quantity

Rack travel in mm : 5.80 Tolerance mm : + 0.10

cm3/1000 strokes : 18.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 02.08.95 Test oil : ISO 4113

Combination No. : 0 400 876 399

Injection pump

Pump designation : PES6A100D410RS2754 EP type number : 0 410 806 002

Governor

Governer design. : RSV425...1100A0C2234

: -3L

: 0 420 232 577 Governer no.

Cust. part No. : RE51910

Customer-spec. information : DEERE Customer : 6076TRW01 Motor : 106.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 4.2!!!!!

Test oil inlet

temp. °C 40 : +- 2.0 Tolerance °C

Overflow valve : 1 457 413 010

Inlet press. bar : 1.5

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 bar : +- 1.5 Tolerance bar

: 1 680 750 008 Test lines

Outside diameter : 6.0 x inside diameter : 2.0 x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 17.0 Tolerance bar : + 1.0

Prestroke mm 3.00 : +- 0.05 Tolerance mm Check

tolerance mm : + 0.10

Rack travel in mm: 10.50 : +- 1.50 Tolerance mm

Firing order : 1-5-3-6-2-

: 0-60-120-180-240 Phasing

: -300

Start of delivery blocking

*NW after s.o.d. : 13.50 Tolerance : +- 0.50

Check

tolerance *NW : +- 0.75

Barrel no. : 1

Beginning of delivery differende

and maximum rack

travel 10.50 Difference * CS : 7.00

BASIC SETTING

Rack travel in mm: 9.75	
Tolerance mm : + 0.05	FULL LOAD DELIVERY AT FULL LOAD STOP
+ 0.03	TOLL LONG PERIVERY AT TOLL LONG BYCK
Del. quantity	Rated speed rpm : 1100
cm3/1000 strokes : 90.0	Aneroid pressure
	hPa : -
Tolerance +	Del. quantity
cm3/1000 strokes : + 1.0 +	cm3/1000 strokes : 90.0 Tolerance
Check tolerance	cm3/1000 strokes : +- 1.0
cm3/1000s. : +- 3.0	Check tolerance
	cm3/1000s. : +- 3.0
Spreed	Spreed
· · · · · · · · · · · · · · · · · · ·	Tolerance
Tolerance	cm3/1000 strokes : 4.0
cm3/1000 strokes : 4.0 +	Check tolerance
Charles to Language	cm3/1000s. : 6.5
Check tolerance + cm3/1000s. : 6.5	
Cm5/10005.	
<u> </u>	CONTROL LEVER
1	
Rated speed rpm : 425	control lever
+	position degree : 98.0
Rack travel in mm: 5.80 +	tolerance degree : +- 4.0
Tolerance mm : + 0.10 +	24774 27774
Del. quantity	RATED SPEED
cm3/1000 strokes : 28.0	rack travel mm : 8.70 Rated speed rpm : 1150
Tolerance + 2.0 +	Rated speed rpm : 1150 Tolerance 1/min : +- 5
Check tolerance	Toterance Dimini
cm3/7000s. : + 4.5	rack travel mm : 4.00
Spreed	Rated speed rpm : 1205
Tolerance	Tolerance 1/min : +- 5
cm3/1000 strokes : 6.0	
Check tolerance +	rack travel mm : 0.85
cm3/1000s. : 8.0 +	Tolerance mm : +- 0.55
†	Rated speed rpm : 1350
(B) SETTING OF INJECTION PUMP	rack travel mm : 4.00
WITH GOVERNOR	Rated speed rpm : 1215
41111 00121(101)	Tolerance 1/min : + 15
į.	
GUIDE SLEEVE POSITION +	
†	LOW YOLF
control lever	LOW IDLE
position degree : - 3	
Rated speed rpm : 800	control lever
Adda opeca i piii	position degree : 74.0
Rack travel in mm: 0.50	tolerance degree : +- 4.0
Tolerance mm : + 0.20	-
+	Setting point w/out bumper spring
governor spring +	
pre-tension +	Rated speed rpm : 425
click setting x : 4.00	rack travel mm : 5.30 Tolerance mm : +- 0.10
Ī	roceratice limit : +- U.1U

Rated speed rpm : 100 CRT mm min. : > 19.00 Testing: Rated speed rpm : 425 rack travel mm : 5.80 : + 0.10Tolerance mm TORQUE CONTROL Rated speed rpm : 1100 rack travel mm : 9.75 : **←** 0.05 Tolerance mm Rated speed rpm : 700 rack travel mm : 10.80 ; +- 0.10 Tolerance mm Start interlock Rated speed rpm : > 100 Check speed 1/min ; > 80 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa Rated speed rpm : 700 Del. quantity cm3/1000 strokes : 112.5 Tolerance cm3/1000 strokes : +- 2.0Check tolerance cm3/1000s. : +- 4.0 STARTING FUEL DELIVERY 100 Rated speed rpm : Del. quantity cm3/1000 strokes : 110.0 Tolerance cm3/1000 strokes : +- 10.0Check tolerance cm3/1000s. : +- 15.0 LOW IDLE

Rated speed rpm : 425 Rack travel in mm: 5.80 Tolerance mm : +- 0.10 Del. quantity cm3/1000 strokes : 28.0 Tolerance cm3/1000 strokes : + 2.0Check tolerance cm3/1000s.: +- 4.5 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s.8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 11.08.97 Test oil : ISO 4113

Combination No. : 0 402 776 814

Injection pump

Pump designation : PES6P120A320LS7285 EP type number : 0 412 726 892

Governor

Governer design. : RSV350...1000P4A564

Governer no. : 0 421 833 413

Cust. part No. : 1821048091

Customer—spec. information Customer : NAVISTAR Motor : DTA-531 Power KW : 224.0

TEST BENCH REQUIREMENTS

Inlet line : 2.4

Test oil inlet

temp. *C : 40 Tolerance *C : + 2.0

Overflow valve : 2 417 413 076

Inlet press. bar : 2.8 Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm : 2.90
Tolerance mm : + 0.05
Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance *NW : + 0.75

Start of delivery blocking

Tolerance : + 0.50

Check

tolerance *NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm : 12.85 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 201.0

K05

Tolerance cm3/1000 strokes	: ← 1.0
Check tolerance cm3/1000s.	: +- 4.0
Spreed	
Yolerance cm3/1000 strokes	: 5.0
Check tolerance cm3/1000s.	: 9.0
Rated speed rpm	: 350
Rack travel in mm	: 5.90
Tolerance mm Del. quantity	: + 0.10
cm3/1000 strokes	: 32.5
Tolerance cm3/1000 strokes	: ← 3.0
Check tolerance cm3/1000s. Spreed	: +- 5.0
Tolerance	. • •
cm3/1000 strokes Check tolerance	: 8.0
cm3/1000s.	: 12.0
(B) SETTING OF IN. WITH GOVERNOR	JECTION POMP
GUIDE SLEEVE POSI	TION
control lever position degree Rated speed rpm	: - 1 : 800
Rack travel in mm Tolerance mm	: 0.50 : + 0.20
governor spring pre-tension click setting x	: 5.00
FULL LOAD DELIVERY	Y AT FULL LOAD STOP
Rated speed rpm	: 1000
Aneroid pressure hPa	: 1500
Del. quantity cm3/1000 strokes	: 201.0

Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: +- 1.0 : +- 4.0 : 5.0 : 9.0
CONTROL LEVER	
control lever position degree tolerance degree	: 111.0 : + 4.0
RATED SPEED rack travel mm Rated speed rpm Tolerance 1/min	: 11.80 : 1055 : + 5
rack travel mm Rated speed rpm Tolerance 1/min	: 4.00 : 1105 : + 5
rack travel mm Tolerance mm Rated speed rpm	: 0.50 : +- 0.50 : 1150
rack travel mm Rated speed rpm Tolerance 1/min	: 4.00 : 1110 : + 5
LOW IDLE	
control lever position degree tolerance degree	
Satting point w/a	ut humbon coning

Setting point w/out bumper spring

Rated speed rpm : 100

CRT mm min. : > 19.00

Testing:

Rated speed rpm : 350 rack travel mm : 5.90 Tolerance mm : + 0.10

TORQUE CONTROL

rack travel mm	:	12.85
Tolerance mm	; +-	0.05

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm	:	1000
Pressure hPa	:	1500
rack travel mm	:	12.85
Tolerance mm	: ┥	─ 0.05

Rated speed rpm	:	1000
Pressure hPa	:	
rack travel mm	:	7.90
Tolerance mm	: +	- 0.20

MEASUREMENT

Rated	speed	rpm	:	1000
-------	-------	-----	---	------

Pressure hPa	:	850
rack travel mm	:	11.50
Tolerance mm	: +	- 0.20

Pressure hPa	:	350
rack travel mm	:	8.95
Tolerance mm	: +-	0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure		
hPa	:	-
Rated speed rpm	:	500
Del. quantity		
cm3/1000 strokes	:	87.5
Tolerance		
cm3/1000 strokes	: +	- 2.0
Check tolerance		
cm3/1000S.	: +	- 4.0

STARTING FUEL DELIVERY

Rated speed rpm	:		100
rack travel mm	:		20.00
Tolerance mm	:	+-	1.00
Del. quantity			405.0
cm3/1000 strokes	:		185.0
Tolerance			20.0
cm3/1000 strokes	:	+	20.0
Check tolerance			25.0
cm3/1000s.	:	+	25.0

LOW IDLE

Rated speed rpm	: 350
Rack travel in mm Tolerance mm Del. quantity	: 5.90 : + 0.10
cm3/1000 strokes Tolerance	: 32.5
cm3/1000 strokes	: +- 3.0
Check tolerance cm3/1000s. Spreed	: +- 5.0
0.110 TOGG 0 0 1 1 4 1 1 0 0	: 8.0
Check tolerance cm3/1000s.	: 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 05.08.97 : ISO 4113

Combination No. : 0 402 746 635

Injection pump

Pump designation : PES6P120A720RS7366 EP type number : 0 472 726 933

Governor

Governer design. : RQV275...1100PA1356K

Governer no. : 0 421 815 557

Cust. part No. :

Customer-spec. information

Customer : IVECO-FRANCE : 8460.41T.2036 Motor

: 185.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

40 temp. °C + 2.0 Tolerance °C

Overflow valve : 2 417 413 076

Inlet press. bar : 2.5 Tolerance bar : \leftarrow 0.1

Overflow quantity

min. L/h : 160 Tolerance L/h : +- 10.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

bar : 208.5 Tolerance bar : ← 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 2.85 Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 20.50 Tolerance mm : +- 0.50

Firing order : 1-5- 3- 6- 2-

Phasing : 0-60-120-180-240

: -300

: +- 0.50 Tolerance

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

Start of delivery mark

Check

tolerance *NW : +- 0.40

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 10.40

Tolerance mm : \leftarrow 0.05

Del. quantity cm3/1000 strokes : 202.0	+ Tolerance mm : +- 0.25 + Rated speed rpm : 1440
Tolerance cm3/1000 strokes : +- 1.0	guide sleeve + travel mm : 13.50 + Tolerance mm : + 0.50
Check tolerance cm3/1000s. : +- 4.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Spreed	Rated speed rpm : 1100
Tolerance cm3/1000 strokes : 5.0	Aneroid pressure hPa : 1200 Del. quantity
Check tolerance cm3/1000S. : 9.0	cm3/1000 strokes : 202.0 Tolerance cm3/1000 strokes : +- 1.0
Date of general map 275	Check tolerance cm3/1000s. : +- 4.0
Rated speed rpm : 275	+ Spreed + Tolerance
Rack travel in mm : 6.20 Tolerance mm : +- 0.10	+ cm3/1000 strokes : 5.0 + Check tolerance
Del. quantity cm3/1000 strokes : 19.0 Tolerance	+ cm3/1000s. : 9.0
cm3/1000 strokes : + 3.0 Check tolerance	CONTROL LEVER
$cm3/1000s.$: \leftarrow 6.0	control lever
Spreed Tolerance	position degree : 116.0
cm3/1000 strokes : 8.0 Chack tolerance	tolerance degree : +- 4.0
cm3/1000s. : 12.0	+ RATED SPEED + rack travel mm : 10.50 + Rated speed rpm : 1145
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Tolerance 1/min : +- 5 - Check - speed 1/min : +- 10
	 }
GUIDE SLEEVE TRAVEL	+ rack travel mm : 4.00 + Rated speed rpm : 1220
Rated speed rpm : 1155 guide sleeve	+ Tolerance 1/min : + 15 + Check
travel mm : 9.76 Tolerance mm : + 0.15	speed 1/min : +- 20
Rated speed rpm : 275 guide sleeve	rack travel mm : 0.50 Tolerance mm : +- 0.50 Rated speed rpm : 1350
travel mm : 1.70 Tolerance mm : + 0.20	1
Rated speed rpm : 791	
guide sleeve travel mm : 6.42	+ LOW IDLE
Tolerance mm : + 0.25	control lever
Rated speed rpm : 460 guide sleeve	position degree : 75.0 tolerance degree : +- 4.0
travel mm : 3.77	+

K09

Setting point w/o	out bumper spring +	
Rated speed rpm	: 175	Start interlock
CRT mm min.	:> 7.70	Rated speed rpm : > 180 Rated speed rpm : < 220
Testing:	1	Check
Rated speed rpm rack travel mm	: 275 : 6.20	speed 1/min : > 160 Check
Tolerance mm	: + 0.10	speed 1/min : < 240
Rated speed rpm	: 315	FUEL DELIVERY CHARACTERISTICS
TORQUE CONTROL Raïed speed rpm rack travel mm Tolerance mm Rated speed rpm	: 10.40 : + 0.05 : 800	Aneroid pressure hPa : 1200 Rated speed rpm : 600 Del. quantity cm3/1000 strokes : 216.0
rask travel mm Tolerance mm		Tolerance cm3/1000 strokes : +- 3.0 Check tolerance
Rated speed rpm rack travel mm Tolerance mm	: 11.70	cm3/1000s. : +- 6.0
Rated speed rpm rack travel mm Tolerance mm	: 12.50	Aneroid pressure hPa : - Rated speed rpm : 600 Del. quantity cm3/1000 strokes : 145.0 Tolerance
ANEROID/ALTITUDE COMPENSATOR TEST		cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0
SETTING	1	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 1200 + : 11.70 +	STARTING FUEL DELIVERY Set starting CRT at K-cam.
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 600 : - : 9.40 : +- 0.20	Rated speed rpm : 100 rack travel mm : 12.50 Tolerance mm : + 0.50 Del. quantity cm3/1000 strokes : 150.0
MEASUREMENT	<u> </u>	Tolerance cm3/1000 strokes : +- 15.0
Rated speed rpm	: 600	Check tolerance cm3/1000s. : +- 19.0
Pressure hPa rack travel mm Tolerance mm	: 280 : 10.10 : ← 0.20	
Pressure hPa rack travel mm Tolerance mm	: 410 : 11.20 : + 0.10	LOW IDLE Rated speed rpm : 275

K10

Rack travel in mm Tolerance mm	:	+-	6.20 0.10
Del. quantity cm3/1000 strokes	:		19.0
Tolerance cm3/1000 strokes	:	+-	3.0
Check tolerance cm3/1000s.	:	+	6.0
Spreed Tolerance			
cm3/1000 strukes Check tolerance	:		8.0 12.0
cm3/1000S.	:		12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 06.08.97 Test oil : ISO 4113

Combination No. : 0 402 846 078

Injection pump

Pump designation : PE6P12OA32ORS8044 EP type number : 0 412 826 036

Governor

Governer design. : RQV300...1050PA1225

Governer no. : 0 421 814 151

Cust. part No. : 11031993

: -P02 v.03/97

Customer-spec. information Customer : VCE

Motor : TD122KAE Power KW : 245.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

: 40 temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 078

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Overflow quantity

min. l/h : 160
Tolerance l/h : + 20.0

Test nozzle holde

assembly : 1 688 901 103

Opening pressure

: 208.5 Tolerance bar : + 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.50 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 11.00 Tolerance mm : +- 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300 Tolerance : +- 0.50

Check

tolerance "NW : +- 0.75

Start of delivery mark

Tolerance : \leftarrow 0.50

Check

tolerance *NW : +- 0.75

Barrel no. : 1

BASIC SETTING

	+
Rack travel in mm : 11.60 Tolerance mm : + 0.05	Rated speed rpm : 490 guide steeve travel mm : 4.65
Del. quantity cm3/1000 strokes : 236.0	Tolerance mm : +- 0.25 Rated speed rpm : 1300
Tolerance cm3/1000 strokes : + 1.0	guide sleeve travel mm : 11.50 Tolerance mm : + 0.50
Check tolerance cm3/1000s. : +- 4.0	GUIDE SLEEVE POSITION
Spreed	T GOIDE SLEEVE POSITION
Tolerance cm3/1000 strokes : 8.0	control lever position degree : - 1 Rated speed rpm : 1190
Check tolerance cm3/1000s. : 11.0	Rack travel in mm: 10.60 Tolerance mm: + 1.30
Rated speed rpm : 325	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm: 3.60	Rated speed rpm : 700
Tolerance mm : +- 0.10	Aneroid pressure
Del. quantity	+ hPa : 1500
cm3/1000 strokes : 23.0	+ Del. quantity
Tolerance	+ cm3/1000 strokes : 236.0
cm3/1000 strokes : + 3.0	+ Tolerance
Check tolerance	+ cm3/1000 strokes : +- 1.0
cin3/1000s. : +- 6.0	+ Check tolerance
Spreed	+ cm3/1000s. : +- 4.0
Tolerance cm3/1000 strokes : 5.0	+ Spreed + Tolerance
Check tolerance	cm3/1000 strokes : 8.0
cm3/1000s. : 8.0	+ Check tolerance
	cm3/1000s. : 11.0
(B) SETTING OF INJECTION PUMP	1
WITH GOVERNOR	
	CONTROL LEVER
GUIDE SLEEVE TRAVEL	t control lever
TO A TO THE TOTAL	position degree : 62.0
Rated speed rpm : 1131 guide sleeve	tolerance degree : +- 4.0
travel mm : 8.61	- control lever
Tolerance mm : + 0.15	+ position degree : 122.0
	tolerance degree : +- 4.0
Rated speed rpm : 325	+
guide sleeve	RATED SPEED
travel mm : 2.04	rack travel mm : 10.60
Tolerance mm : +- 0.20	+ Rated speed rpm : 1120 + Tolerance 1/min : +- 5
Rated speed rpm : 1038	T TOLET GIVE (/IIIIII . TO)
guide sleeve	rack travel mm : 4.00
travel mm : 7.03	Rated speed rpm : 1180
Tolerance mm : +- 0.25	Tolerance 1/min : +- 15

rack travel mm Tolerance mm Rated speed rpm	: 0.50 : + 0.50 : 1260
LOW IDLE	
control lever position degree tolerance degree	: 64.0 : +- 4.0
control lever position degree tolerance degree	: 14.0 : + 4.0
Setting point w/ou	ut bumper spring
Rated speed rpm	: 225
CRT mm min.	: > 5.40
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 325 : 3.60 : + 0.10
Rated speed rpm	: 375
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 700 : 11.60 : ← 0.05
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1500 : 11.60 : ← 0.05
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 10.00 : +- 0.20
MEASUREMENT	

Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm	: 520 : 1.30 : +- 0.20 : 290 : 0.25 : +- 0.05
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: - 700 : 188.0 : + 1.0 : + 4.0
STARTING FUEL DEL Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 100 : 20.50 : + 0.50
Rated speed rpm Rack travel in mm Tolerance mm Del. quartity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 325 : 3.60 : + 0.10 : 23.0 : + 3.0 : + 6.0 : 5.0 : 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 06.08.97 Edition Test oil : ISO 4113

Combination No. : 0 402 846 079

Injection pump

Pump designation : PE6P12OA32ORS8044 EP type number : 0 412 826 036

Governor

Governer design. : RQV300...1050PA1141

Governer no. : 0 421 814 091

Cust. part No. : 11031994

: -P02 V.06.97

Customer-spec. information

Customer : VCE Motor : TD122KFE

Power KW : 297.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

: 40 temp. °C Tolerance °C : +- 2.0

Overflow valve : 2 417 413 078

Inlet press. bar : 2.5
Tolerance bar : + 0.1

Overflow quantity

min. L/h : 145 Tolerance L/h : +- 20.0

Test nozzle holde

: 1 688 901 103 assembly

Opening pressure sar : 208.5
Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 4.50 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 11.00 Tolerance mm : + 0.50

: 1-5-3-6-2-Firing order

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance *NW : + 0.75

Start of delivery mark

Tolerance : +- 0.50

Check

tolerance *NW : +- 0.75

Barrel no.	: 1	+ Rated speed rpm : 325 + guide sleeve + travel mm : 2.04
		Tolerance mm : +- 0.20
BASIC SETTING		Rated speed rpm : 1038
		+ guide sleeve
Rated speed rpm	: 700	+ travel mm : 7.03
		+ Tolerance mm : +- 0.25
Rack travel in m		Rated speed rpm : 490
Tolerance mm	: ← 0.05	+ guide sleeve
		+ travel mm : 4.65
Del. quantity cm3/1000 strokes	: 298.0	Tolerance mm : +- 0.25
CIID/ 1000 Strukes	. 270.0	Rated speed rpm : 1300
Tolerance		- guide sleeve
cm3/1000 strokes	: 1.0	+ travel mm : 11.50
		+ Tolerance mm : + 0.50
Check tolerance cm3/1000s.	: +- 4.0	İ
CHIDA LODOS.	+.0	GUIDE SLEEVE POSITION
Spreed		+
Tolerance		t control lever
cm3/1000 strokes	: 8.0	position degree : - 1
		Rated speed rpm : 1190
Check tolerance	•	+
cm3/100OS.	: 11.0	+ Rack travel in mm : 12.20 + Tolerance mm : +- 1.30
Dated chaed and	: 325	FULL LOAD DELIVERY AT FULL LOAD STOP
Rated speed rpm	: 325	FOLE EDAD DELIVERY AT FOLE LOAD STOP
Rack travel in m		Rated speed rpm : 700
Tolerance mm	: 0.10	+ Aneroid pressure
Del. quantity cm3/1000 strokes	. 27.0	+ hPa : 1500
Tolerance	: 23.0	+ Del. quantity + cm3/1000 strokes : 298.0
cm3/1000 strokes	: +- 3.0	Tolerance
Check tolerance		- cm3/1000 strokes : + 1.0
cm3/1000s.	: ← 6.0	- Check tolerance
Spreed		+ cm3/1000s. : + 4.0
Tolerance		+ Spreed
cm3/1000 strokes Check tolerance	: 5.0	+ Tolerance + cm3/1000 strokes : 8.0
cm3/1000s.	: 8.0	+ Check tolerance
J		cm3/1000s. : 11.0
(B) SETTING OF IN	NIECTIAN DIMP	1
WITH GOVERNOR	TO COLLOW FORM	
WEITH GOVERNMENT		CONTROL LEVER
		+
GUIDE SLEEVE TRAN	VEL	+ control lever + position degree : 64.0
Rated speed rpm	: 1131	tolerance degree : + 4.0
guide steeve		+
travel mm	: 8.63	control lever
Tolerance mm	: +- 0.15	position degree : 122.0
		+ tolerance degree : +- 4.0

			4
24752 00554		+ Pressure hPa	
RATED SPEED rack travel mm	. 12 25	rack travel mm Tolerance mm	14.00
Rated speed rpm	• 1120	I roterance min	: +- 0.25
Tolerance 1/min	· + 5	Rated speed rpm	• 500
TOTOL GIVE TOWN	•	Pressure hPa	: -
rack travel mm	: 4.00	Pressure hPa rack travel mm	: 10.00
rack travel mm Rated speed rpm	: 1180	+ Tolerance mm	: +- 0.15
Tolerance 1/min	: +- 15	+	
		+ MEASUREMENT	
rack travel mm	: 0.50	†	500
Tolerance mm Rated speed rpm	: + 0.50	+ Kated speed rpm	: 500
kated speed rpm	: 1260	Pagaguna haa	. 950
		+ Pressure hPa + rack travel mm	: 03U : 2 0N
		Tolerance mm	
		- I Totel divice limit	0.20
LOW IDLE		Pressure hPa	: 300
		rack travel mm	: 0.25
		rack travel mm Tolerance mm	: +- 0.05
control lever		+	
position degree	: 64.0	+	
tolerance degree	: ⊢ 4.0	+ Start interlock	
		†	100
control lever	. 42.0	+ Rated speed rpm	: > 100
position degree		+ Rated speed rpm	: > 230
tolerance degree	: 4.0	T Check	
Setting point w/c	nut humner spring	speed 1/min	: > 80
become point with	oct pumper spring	Check	. > 00
Rated speed rpm	: 225	speed 1/min	: > 250
		+	
CRT mm min.	: > 6.00		
_		+ FUEL DELIVERY CHA	ARACTERISTICS
Testing:		†	
Data dana adam	. 725	Ananid	
Rated speed rpm	: 323	+ Aneroid pressure + hPa	
rack travel mm Tolerance mm	0.10	+ Rated speed rpm	700
roterance min	. +- 0.10	Del. quantity	. 700
Rated speed rpm	: 375	cm3/1000 strokes	269.0
Marca opeca i piii	. 312	Tolerance	. 237.3
		- + cm3/1000 strokes	: +- 1.0
TORQUE CONTROL		+ Check tolerance	
Rated speed rpm		+ cm3/1000s.	: +- 4.0
rack travel mm		+ Spreed	
Tolerance mm	: 0.05	+ Tolerance	
	700	cm3/1000 strokes	: 10.0
Rated speed rpm		Check tolerance	: 14.0
rack travel mm		+ cm3/1000s.	: 14.0
Tolerance mm	: +- 0.15		
		- Aneroid pressure	
ANEROID/ALTITUDE		hPa	: -
COMPENSATOR TEST		+ Rated speed rpm	700
John Empirity (1901		+ Del. quantity	
		+ cm3/1000 strokes	. 199 0
		1 61127 1000 361 01663	. 100.0
SETTING		+ Tolerance	. 100.0
SETTING			
SETTING Rated speed rpm	: 500	+ Tolerance	

Check tolerance cm3/1000s. : \leftarrow 4.0

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50 : +- 0.50 Tolerance mm

Del. guantity

cm3/1000 strokes : 165.0

Tolerance

cm3/1000 strokes : \leftarrow 15.0

Check tolerance

: +- 19.0 cm3/1000s.

LOW IDLE

Rated speed rpm : 325

Rack travel in mm: 3.60 : **←** 0.10 Tolerance mm

Del. quantity

cm3/1000 strokes : 23.0

Tolerance

cm3/1000 strokes : \leftarrow 3.0

Check tolerance

cm3/1000s. : +- 6.0

Spreed

Tolerance

5.0 cm3/1000 strokes :

Check tolerance

cm3/1000S. : 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 01.08.97 Test oil : ISO 4113

Combination No. : 0 403 486 106

Injection pump

Pump designation : PES6MW100/321RS1232

EP type number : 0 413 496 226

Governor

Governer design. : RSV300...1150MWOA343

: -2

Governer no. : 0 420 085 210

Cust. part No. : 3-7262

Customer-spec. information

Customer : MAN

Motor : D0826LE 523

Power KW : 169.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

tside diameter.

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0
Tolerance bar : + 1.0

Prestroke mm : 3.55
Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance *NW : +- 0.75

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 925

Rack travel in mm : 13.50
Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 165.0

Tolerance

cm3/1000 strokes : +- 1.0

K20

Check tolerance cm3/1000s. : +- 4.0	+ Check tolerance + cm3/1000s. : +- 4.0 + Spreed
Spreed	Tolerance cm3/1000 strokes : 4.0
Tolerance cm3/1000 strokes : 4.0	Check tolerance cm3/1000s. : 7.5
Check tolerance cm3/1000s. 7.5	
	CONTROL LEVER
Rated speed rpm : 365	control lever position degree : 103.0 tolerance degree : +- 4.0
Rack travel in mm: 4.50	+
Tolerance mm : +- 0.10 Del. quantity	+ RATED SPEED + rack travel mm : 12.15
cm3/1000 strokes : 14.0	Rated speed rpm : 1180
Tolerance	+ Tolerance 1/min : + 5
cm3/1000 strokes : +- 2.0	+
Check tolerance cm3/1000s. : ← 4.5	+ rack travel mm : 4.00 + Rated speed rpm : 1230
cm3/1000s. : +- 4.5 Spreed	+ Rated speed rpm : 1230 + Tolerance 1/min : +- 15
Tolerance	Total area minimum.
cm3/1000 strokes : 3.5	rack travel mm : 1.00
Check tolerance	+ Tolerance mm : + 0.70
cm3/1000s. : 5.5	+ Pated speed rpm : 1400
WITH GOVERNOR	LOW IDLE
GUIDE SLEEVE POSITION	+ control lever
	position degree : 78.0
	+ tolerance degree : +- 4.0
control lever position degree : - 3 Rated speed rpm : 800	Setting point w/out bumper spring
Rack travel in mm: 0.65	Rated speed rpm : 100
Tolerance mm : + 0.35	CRT mm min. : > 19.00
governor spring pre-tension	Testing:
click setting x : 5.50	Rated speed rpm : 365
	rack travel mm : 4.50 Tolerance mm : +- 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP	+
Rated speed rpm : 925	+ rack travel mm : 2.00 + Rated speed rpm : 420
Aneroid pressure	Tolerance 1/min : + 30
hPa : 1200	İ
Del. quantity cm3/1000 strokes : 165.0	TORQUE CONTROL
Tolerance	Rated speed rom : 925
cm3/1000 strokes : +- 1.0	47 FO
	rack travel mm : 13.50 Tolerance mm : + 0.05

SETTING Rated speed rpm : 500 Pressure hPa : 1200 rack travel mm : 13.50 Tolerance mm : + 0.10 Rated speed rpm : 500 Pressure hPa : - rack travel mm : 9.45 Tolerance mm : + 0.05 MEASUREMENT Rated speed rpm : 500 Pressure hPa : 750 rack travel mm : 12.35 Tolerance mm : + 0.15 Pressure hPa : 750 rack travel mm : 9.75 Tolerance mm : + 0.15 Pressure hPa : 150 rack travel mm : 9.75 Tolerance mm : + 0.05 Aneroid pressure hPa : 1200 Rated speed rpm : 1125 Del. quantity cm3/1000 strokes : 163.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s : + 5.0 Spreed Tolerance	Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm	: 1125 : 13.15 : +- 0.05 : 600 : 13.50 : +- 0.10
Rated speed rpm : 500 Pressure hPa : 1200 rack travel mm : 13.50 Tolerance mm : +- 0.10 Rated speed rpm : 500 Pressure hPa : - rack travel mm : 9.45 Tolerance mm : +- 0.05 MEASUREMENT Rated speed rpm : 500 Pressure hPa : 750 rack travel mm : 12.35 Tolerance mm : +- 0.15 Pressure hPa : 750 rack travel mm : 9.75 Tolerance mm : +- 0.15 Pressure hPa : 150 rack travel mm : 9.75 Tolerance mm : +- 0.05 Aneroid pressure hPa : 1200 Rated speed rpm : 1125 Del. quantity cm3/1000 strokes : 163.0 Tolerance cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000s. : +- 5.0 Spreed Tolerance	ANEROID/ALTITUDE COMPENSATOR TEST	
Pressure hPa : 1200 rack travel mm : 13.50 Tolerance mm : + 0.10 Rated speed rpm : 500 Pressure hPa : - rack travel mm : 9.45 Tolerance mm : + 0.05 MEASUREMENT Rated speed rpm : 500 Pressure hPa : 750 rack travel mm : 12.35 Tolerance mm : + 0.15 Pressure hPa : 150 rack travel mm : 9.75 Tolerance mm : + 0.05 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : 1200 Rated speed rpm : 1125 Del. quantity cm3/1000 strokes : 163.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000S. : + 5.0 Spreed Tolerance	SETTING	
Pressure hPa : - rack travel mm : 9.45 Tolerance mm : + 0.05 MEASUREMENT Rated speed rpm : 500 Pressure hPa : 750 rack travel mm : 12.35 Tolerance mm : + 0.15 Pressure hPa : 150 rack travel mm : 9.75 Tolerance mm : + 0.05 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : 1200 Rated speed rpm : 1125 Del. quantity cm3/1000 strokes : 163.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance	Pressure hPa rack travel mm	: 1200 : 13.50
Rated speed rpm : 500 Pressure hPa : 7'50 rack travel mm : 12.35 Tolerance mm : + 0.15 Pressure hPa : 150 rack travel mm : 9.75 Tolerance mm : + 0.05 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : 1200 Rated speed rpm : 1125 Del. quantity cm3/1000 strokes : 163.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance	Pressure hPa rack travel mm	: - : 9.45
Pressure hPa : 750 rack travel mm : 12.35 Tolerance mm : + 0.15 Pressure hPa : 150 rack travel mm : 9.75 Tolerance mm : + 0.05 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : 1200 Rated speed rpm : 1125 Del. quantity cm3/1000 strokes : 163.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance	MEASUREMENT	
rack travel mm : 12.35 Tolerance mm : + 0.15 Pressure hPa : 150 rack travel mm : 9.75 Tolerance mm : + 0.05 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : 1200 Rated speed rpm : 1125 Del. quantity cm3/1000 strokes : 163.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance	Rated speed rpm	: 500
rack travel mm : 9.75 Tolerance mm : + 0.05 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : 1200 Rated speed rpm : 1125 Del. quantity cm3/1000 strokes : 163.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance	rack travel mm	: 12.35
Aneroid pressure hPa : 1200 Rated speed rpm : 1125 Del. quantity cm3/1000 strokes : 163.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000S. : + 5.0 Spreed Tolerance	rack travel mm	: 9.75
hPa : 1200 Rated speed rpm : 1125 Del. quantity cm3/1000 strokes : 163.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000S. : + 5.0 Spreed Tolerance	FUEL DELIVERY CHAR	ACTERISTICS
cm3/1000 strokes : 163.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000S. : + 5.0 Spreed Tolerance	hPa Rated speed rpm	
cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance	cm3/1000 strokes	: 163.0
cm3/1000S. : + 5.0 Spreed Tolerance	cm3/1000 strokes	: + 2.0
	cm3/1000S. Spreed	: +- 5.0
	cm3/1000 strokes	: 6.0
Check tolerance cm3/1000s. 9.0		: 9.0

Aneroid pressure hPa Rated speed rpm	: 1200 : 600
Del. quantity cm3/1000 strokes	: 163.0
Tolerance cm3/1000 strokes Check tolerance	: +- 2.0
cm3/1000s.	: +- 5.0
Aneroid pressure	
hPa Rated speed rpm	500
Del. quantity cm3/1000 strokes Tolerance	: 76.0
cm3/1000 strokes Check tolerance	: +- 1.0
cm3/1000s.	: + 3.0
STARTING FUEL DELI	VERY
Rated speed rpm	: 100
Del. quantity cm3/1000 strokes	: 145.0
Tolerance cm3/1000 strokes Check tolerance	: +- 5.0
cm3/1000s.	: +- 8.0
LOW IDLE	
	: 365
Rack travel in mm Tolerance mm Del. quantity	: 4.50 : + 0.10
cm3/1000 strokes Tolerance	: 14.0
cm3/1000 strokes Check tolerance	: +- 2.0
cm3/1000s. Spreed	: +- 4.5
Tolerance cm3/1000 strokes	: 3.5
Check tolerance cm3/1000s.	: 5.5

Note remarks

Refer to Service Info for test ar adjustment instructions. See microcard(s) W400/...

: 07.08.97 Edition Test oil : ISO 4113

combination No. : 0 401 846 843

Injection pump

Pump designation : PE6P120A720RS3069 EP type number : 0 411 826 712

Governor

: RQV300...1000PA501 Governer design.

: -4

Governer no. : 0 421 813 609

Cust. part No. :

Customer-spec. information

: IVECO-FIAT Customer : 8210.22.371 Motor

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C Tolerance *C : +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 019 assembly

Opening pressure

208.5 Tolerance bar 1.5

: 1 680 750 075 Test lines

Outside diameter : 8.0

x inside diameter : 3 x length mm : 1000 3.0

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm 3.55 Tolerance mm : +- 0.05 Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5- 3- 6- 2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.50

Check

tolerance *NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm : 12.55 : +- 0.05 Tolerance mm

Del. quantity

cm3/1000 strokes : 206.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +- 4.0

Spreed

+-	6.2 0.1 20.	0 0 0 0 0			\ \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	
+-	6.2 0.1 20. 3. 6.	0 0 0 0			\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	
+-	6.2 0.1 20. 3. 6.	0 0 0 0			+++++++++++++	
+ +	0.120.3.6.8.12.	0 0 0 0				
+-	20. 3. 6. 8.	0 0 0 0			+++++++++++	
-	6.8.12.	0 0 0			++++++++	; ; ;
ctio	8.	0 0			+++++++	; ; ;
CTIO	12.	0			† + + + + +	; ;
CTIO	12.	0			+ + + + +	; ! !
CTIO					+++++++++++++++++++++++++++++++++++++++	1
CTIO	N PU	MP			Ì	1
	M PU	MP				
					1	(
					‡	;
					+	ı
7	1000				†	
+	8.1 0.1				+	;
	325				‡	-
	1.7	ro.			‡	i
+-					‡	
	450				+	
-					1	
•		.0			+	
	800				‡	
+					+	;
1	300				‡	ı
					‡	1
+-	0.5	U			‡	•
	+-	+ 0.2 450 + 3.1 + 0.2 800 + 0.2 1300 11.5	1.70 ← 0.20 450 ← 3.10 ← 0.20 800 ← 0.20 ← 0.20	1.70 ← 0.20 450 ← 3.10 ← 0.20 800 ← 0.20 1300 11.50	1.70 +- 0.20 450 3.10 0.20 800 0.20 1300 11.50 0.50	1.70 +- 0.20 450 3.10 +- 0.20 800 5.90 +- 0.20 1300 11.50

Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 700 : 206.0 : +- 1.0 : +- 4.0 : 5.0 : 9.0
CONTROL LEVER	
control lever position degree tolerance degree	: 120.0 : +- 4.0
RATED SPEED rack travel mm Rated speed rpm Tolerance 1/min Check speed 1/min	: 11.50 : 1045 : +- 5 : +- 10
rack travel mm Rated speed rpm Tolerance 1/min Check speed 1/min	: 4.00 : 1145 : +- 15 : +- 20
rack travel mm Tolerance mm Rated speed rpm	: 0.50 : +- 0.50 : 1250
LOW IDLE	
control lever position degree tolerance degree	: 67.0 : +- 4.0
Setting point w/o	out bumper spring
Rated speed rpm	: 100
CRT mm min.	: > 7.70
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 300 : 6.20 : +- 0.10

Rated speed rpm	: 370	† † †	Rated speed rpm Del. quantity cm3/1000 stroke
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 12.55		Tolerance cm3/1000 stroke Check tolerance cm3/1000s.
Rated speed rpm rack travel mm Tolerance mm	: 500 : 12.60 : ← 0.10	+ + +	STARTING FUEL D
ANEROID/ALTITUDE COMPENSATOR TEST SETTING		+ + + + +	Del. quantity cm3/1000 stroke Tolerance cm3/1000 stroke Check tolerance cm3/1000s.
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 700	+ + + - - - -	LOW IDLE
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: - : 9.80	+ + + +	Rated speed rpm Rack travel in Tolerance mm
MEASUREMENT		+	Del. quantity cm3/1000 stroke Tolerance
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 230	+++++++++++++++++++++++++++++++++++++++	cm3/1000 stroke Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 stroke
Pressure hPa rack travel mm Tolerance mm	: 280 : 11.85 : + 0.05	+++	Check tolerance cm3/1000s.
FUEL DELIVERY CHA	RACTERISTICS		End of test spe
Aneroid pressure hPa Rated speed rpm Del. quantity	: 700 : 5 0 0	† † † †	
cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.		+++++++++++++++++++++++++++++++++++++++	
Aneroid pressure hPa	: -	T + + +	

m : 500 es : 132.0 ces : + 1.0 : **←** 4.0 DELIVERY om : 100 ces : 200.0 tes : +- 15.0: **←** 19.0 m : 300 mm: 6.20 : **←** 0.10 xes : 20.0 es : +- 3.0: +- 6.0 es : 8.0 : 12.0

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... : 23.01.96 Edition Test oil : ISO 4113 Combination No. : 0 401 846 8820 Injection pump Pump designation : PE6P120A320RS3206-1 EP type number : 0 411 826 775 Governor Governer design. : RQ750PA783-1 Governer no. : 0 421 801 432 Cust. part No. : 865037 P03 V. 02/95 Customer-spec. information Customer : PENTA : TAMD 122 Motor TEST BENCH REQUIREMENTS Inlet line : 3.1 Vibration damper (RoBo diaphragm) : 4.2 Test oil inlet temp. °C 40 Tolerance °C : + 2.0 Overflow valve : 1 457 413 010 Inlet press. bar : 1.5 Test nozzle holde : 1 688 901 019 assembly

x inside diameter : 3.0 x length mm : 1000 REMARKS (A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values _____ BEGINNING OF DELIVERY Test pressure bar : 26.0 Tolerance bar : + 1.0 Prestroke mm : 3.50 Tolerance mm : +- 0.05 Tolerance mm Check : +- 0.10 tolerance mm Rack travel in mm: 10.50 Tolerance mm : + 1.50 Firing order : 1-5- 3- 6- 2-Phasing : 0-60-120-180-240 : -300 : +- 0.50 Tolerance Check : +- 0.75 tolerance *NW Start of delivery mark Barrel no. : 1 BASIC SETTING Rated speed rpm : 700 Rack travel in mm : 13.80 Tolerance mm : + 0.05 Del. quantity cm3/1000 strokes : 345.0 Tolerance cm3/1000 strokes : \leftarrow 1.0

Outside diameter : 8.0

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 075

Object to the second		Ť
Check tolerance cm3/1000s.	: + 4.0	FULL LOAD DELIVERY AT FULL LOAD STOP
•		Paradiana di 200
Spreed		Rated speed rpm : 700 Aneroid pressure
Tolerance		+ hPa : -
cm3/1000 strokes	: 5.0	· ·
CHIDA LOCAL STELLARES	. ,,,,	+ Del. quantity + cm3/1000 strokes : 345.0
Charl Aslamana		
Check tolerance	: 9.0	Tolerance
cm3/1000s.	; 9.0	cm3/1000 strokes : +- 1.0
		+ Check tolerance
		+ cm3/1000s. : + 4.0
	7-0	+ Spreed
Rated speed rpm	: 300	+ Tolerance
Del. quantity		+ cm3/1000 strokes : 5.0
cm3/1000 strokes	: 20.0	+ Check tolerance
Tolerance		$\frac{1}{2}$ cm3/1000s. : 9.0
cm3/1000 strokes	: +- 3.0	+
Check tolerance		+
cm3/1000s.	: +- 6.0	ļ
Spreed		CONTRC'_ LEVER
Tolerance		1
cm3/1000 strokes	: 5.0	control lever
Check tolerance		position degree : 94.0
cm3/1000s.		tolerance degree : + 4.0
UIID7 10000 .	. 0.0	Local dilica degree 4.0
		T RATED SPEED
(B) SETTING OF I	NIECTION DUMD	+ rack travel mm : 12.80
	MATCH TOM COME	•
WITH GOVERNOR		Rated speed rpm : 825
		Tolerance 1/min : +- 3
CUIDE OF SELECTION	A/CI	+ + rack travel mm : 4.00
GUIDE SLEEVE TRA	ACF	The state of the s
	: 759	The second secon
Rated speed rpm	: 759	† Tolerance 1/min : ← 15
guide sleeve	. (70	T
travel mm	: 6.78	rack travel mm : 0.50
Tolerance mm	: +- 0.15	Tolerance mm : +- 0.50
	540	+ Rated speed rpm : 950
Rated speed rpm	: 510	† <u></u>
guide sleeve		ASSEMBLY GOVERNOR SETTING
travel mm	: -6.60	+
Tolerance mm	: 0.25	+ Rated speed rpm : 822
		rack travel mm : 12.80
Rated speed rpm	: 840	+
منتجم المائيين		Rated speed rpm : 880
travel mm	: 16.84	+ Tolerance 1/min : + 5
travel mm Tolerance mm	: - 0.25	rack travel mm : 4.00
10501 WHO 1888		- 1 GOT 1 GT 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Rated speed rpm	: 790	rack travel mm : 0.50
autida ci eave		Tolerance mm : + 0.50
travel mm	: 10.00	+ Rated speed rpm : 950
Tolerance mm	. 10.00	T rated speed (pill . 750
locerance mm	0.65	T
	. 950	Detail speed speed . 927
Rated speed rpm	: 600	Rated speed rpm : 823 rack travel mm : 12.80
guide sleeve	44.50	† rack travel mm : 12.80
travel mm	: 11.50	†
Tolerance mm	: ← 0.50	Rated speed rpm : 881
		Tolerance 1/min : + 5
		† rack travel mm : 4.00

rack travel mm	: 0.50
Tolerance mm	: ← 0.50
Rated speed rpm	: 950
Rated speed rpm	: 824
rack travel mm	: 12.80
Rated speed rpm	: 882
Tolerance 1/min	: + 5
rack travel mm	: 4.00
rack travel mm	: 0.50
Tolerance mm	: + 0.50
Rated speed rpm	: 950
Rated speed rpm	: 825
rack travel mm	: 12.80
Rated speed rpm	: 883
Tolerance 1/min	: ← 5
rack travel mm	: 4.00
rack travel mm	: 0.50
Tolerance mm	: + 0.50
Rated speed rpm	: 950
Rated speed rpm	: 826
rack travel mm	: 12.80
Rated speed rpm Tolerance 1/min rack travel mm	
rack travel mm	: 0.50
Tolerance mm	: → 0.50
Rated speed rpm	: 950
Rated speed rpm	: 827
rack travel mm	: 12.80
Rated speed rpm	: 885
Tolerance 1/min	: +- 5
rack travel mm	: 4.00
rack travel mm	: 0.50
Tolerance mm	: ← 0.50
Rated speed rpm	: 950

TORQUE CONTROL		
Rated speed rpm	:	700
rack travel mm	:	13.80
Tolerance mm	: +-	0.05

LO	WI	DLE
----	----	-----

Rated speed rpm Del. quantity	:	300	
cm3/1000 strokes	:	20.0	
cm3/1000 strokes	: +-	3.0	
Check tolerance cm3/1000s.	: +-	6.0	
Spreed Tolerance			
cm3/1000 strokes Check tolerance	:	5.0	
cm3/1000s.	:	8.0	

Note remarks:

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 07.08.97 Edition : ISO 4113 Test oil

Combination No. : 0 401 849 760

Injection pump

Pump designation : PE10P120A520/4LS3869

EP type number : 0 411 829 713

Governor

Governer design. : RQV250...9COPA1198

Governer no. : 0 421 814 117

Cust. part No. :

Customer-spec. information

Customer : DHI : D2840LE Motor Power KW : 340.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C 40 Tolerance °C : +- 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 1.5

Overflow quantity

min. l/h : 130 Tolerance l/h : + 20.0

Test nozzle holde

: 1 688 901 019 assembly

Opening pressure

Tolerance bar : + 1.5

Test Lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter : 3.0

x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 4.25 : +- 0.05 Tolerance mm

Check

: +- 0.10 tolerance mm

Rack travel in mm : 10.50 Tolerance mm : + 1.50

: 10-9-4-1-8 firing order

: - 7- 6- 3- 5 : - 2

Phasing : 0-45-72-117-144

: -189-216-261-288

: -333

Tolerance : +- 0.50

Check

tolerance *NW : ← 0.75

Start of delivery mark

Tolerance : +- 0.50

Check

tolerance *NW : +- 0.75

Barrel no. : 10

BASIC SETTING

	t
Rack travel in mm : 11.40	Rated speed rpm : 1240
Tolerance mm : + 0.05	guide sleeve
roter differ that	travel mm : 11.50
Del. quantity	Tolerance mm : + 0.50
cm3/1000 strokes : 196.0	1
Tolerance	GUIDE SLEEVE POSITION
cm3/1000 strokes : + 1.0	+
	†
Check tolerance cm3/1000s. : +- 4.0	control lever
cm5/10005. : +- 4.0	+ position degree :- 1 + Rated speed rpm : 1065
Spreed	T rated speed (pill : 100)
opi cea	Rack travel in mm: 10.40
Tolerance	Tolerance mm : + 1.30
cm3/1000 strokes : 6.0	}
Check tolerance	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000s. : 10.0	† Data I am d am (50
	Rated speed rpm : 650 Aneroid pressure
	+ hPa : -
Rated speed rpm : 250	Del. quantity
The control of the co	cm3/1000 strokes : 196.0
Rack travel in mm: 6.90	Tolerance
Tolerance mm : +- 0.10	+ cm3/1000 strokes : +- 1.0
Del. quantity	+ Check tolerance
cm3/1000 strokes : 25.0	+ cm3/1000s. : +- 4.0
Tolerance	+ Spreed
cm3/1000 strokes : +- 3.0 Check tolerance	+ Tolerance + cm3/1000 strokes : 6.0
cm3/1000S. : +- 6.0	+ Check tolerance
Spreed	- cm3/1000s. : 10.0
Tolerance	+
cm3/1000 strokes : 8.0	
Check tolerance	
cm3/1000s. : 12.0	+ CONTROL LEVER
	†
(B) SETTING OF INJECTION PUMP	<pre>control lever position degree : 63.0</pre>
WITH GOVERNOR	tolerance degree : +- 4.0
HZ177 GOYEMON	+ total and day.
	control lever
GUIDE SLEEVE TRAVEL	position degree : 118.0
2/2	tolerance degree : +- 4.0
Rated speed rpm : 969	TATES COURS
guide sleeve travel mm : 8.42	+ RATED SPEED + rack travel mm : 10.40
travel mm : 8.42 Tolerance mm : + 0.15	+ Rated speed rpm : 945
ioterance usu	Tolerance 1/min : +- 5
Rated speed rpm : 250	+
guide sleeve	rack travel mm : 4.00
travel mm : 1.04	Rated speed rpm : 1060
Tolerance mm : +- 0.20	+ Tolerance 1/min : ← 15
Dated aread are - 750	
Rated speed rpm : 750	rack travel mm : 0.50 Tolerance mm : + 0.50
guide sleeve travel mm : 6.57	Rated speed : 1150
Tolerance mm : + 0.25	+
	•

LOW IDLE	
control lever position degree tolerance degree	: 68.0 : + 4.0
control lever	
position degree tolerance degree	: 13.0 : +- 4.0
Setting point w/o	ut bumper spring
Rated speed rpm	: 150
CRT mm min.	: > 8.10
Testing:	
Rated speed rpm	
rack travel mm Tolerance mm	: 6.90 : ← 0.10
Rated speed rpm	: 330
TORQUE CONTROL	
Rated speed rpm	: 550
rack travel mm Tolerance mm	: 11.40 : +- 0.05
Rated speed rpm	
rack travel mm	: 11.40
Tolerance mm	: +- 0.10
Start interlock	
Rated speed rpm	: > 100
Rated speed rpm	
Check	
speed 1/min Check	: > 80
speed 1/min	: < 190
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa	: -
Dated speed som	000

Tolerance cm3/1000 strokes	:	+-	3.0	
Check tolerance cm3/1000s.	:	+-	6.0	
STARTING FUEL DEL	IVI	ERY		
Rated speed rpm Del. quantity	:		100	
cm3/1000 strokes	:		310.0	
Tolerance cm3/1000 strokes	:	+	20.0	
Check tolerance cm3/1000S.	:	+-	24.0	
LOW IDLE				
Rated speed rpm	:		250	
Rack travel in mm Tolerance mm		+	250 6.90 0.10	
Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes	:	+	6.90	
Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	::	+-	6.90 0.10	
Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	::	+-	6.90 0.10 25.0	
Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance	:	+	6.90 0.10 25.0 3.0	
Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance	•	+	6.90 0.10 25.0 3.0 6.0	
Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance	•	+	6.90 0.10 25.0 3.0 6.0	
Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance	•	+	6.90 0.10 25.0 3.0 6.0	

Rated speed rpm : Del. quantity cm3/1000 strokes :

900

200.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 07.08.97 Test oil : ISO 4113

Combination No. : 0 402 046 350

Injection pump

Pump designation : PES6P110A720RS531 EP type number : 0 412 016 076

Governor

Governor design. : ROV300...1100PA1016

: -7

Governer no. : 0 421 813 972

Cust. part No. :

Customer—spec. information Customer : IVECO-UNIC Motor : 8361.25.510

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. $^{\circ}$ C :

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : +- 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x Length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 2.05
Tolerance mm : +- 0.50

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5- 3- 6- 2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.50

Check

tolerance *NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm: 10.35

Tolerance mm : \leftarrow 0.05

Del. quantity cm3/1000 strokes : 121.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +- 3.5

Spreed

Tolerance cm3/1000 strokes	: 4.0	control lever position degree : - 1
Check tolerance cm3/1000s.	: 7.5	Rated speed rpm : 1240
	4	Rack travel in mm: 9.30 Tolerance mm: + 1.30
Rated speed rpm	: 300	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mo	n: 6.20	+ TOLL LOAD DELIVERY AT TOLL LOAD STOT
Tolerance mm	: + 0.10	+ Rated speed rpm : 1100
Del. quantity	45.5	+ Aneroid pressure
cm3/1000 strokes	: 15.5	+ hPa : 700
Tolerance cm3/1000 strokes	· + 25	+ Del. quantity + cm3/1000 strokes : 121.0
Check tolerance	• • • • • • • • • • • • • • • • • • • •	Tolerance
cm3/1000s.	: +- 5.0	cm3/1000 strokes : +- 1.0
Spreed		- Check tolerance
Tolerance	, -	+ cm3/1000s. : + 3.5
cm3/1000 strokes		+ Spreed
Check tolerance cm3/1000s.		+ Tolerance + cm3/1000 strokes : 4.0
CIID7 10005.	. (.)	Check tolerance
		- cm3/1000s. : 7.5
GUIDE SLEEVE TRAY	/EL	CONTROL LEVER
Dated aread non	: 750	+ control lever + position degree : 121.0
Rated speed rpm guide sleeve	. 750	tolerance degree : +- 4.0
travel mm	: 4.70	+
Tolerance mm	: ← 0.20	RATED SPEED
~ · · · ·	4415	rack travel mm : 9.30
Rated speed rpm	: 1145	Rated speed rpm : 1145 Tolerance 1/min : +- 5
guide sleeve travel mm	: 8.40	- Check
Tolerance mm		speed 1/min : +- 10
Rated speed rpm	: 300	T rack travel mm : 4.00
guide sleeve		rack travel mm : 4.00 Rated speed rpm : 1220
guide sleeve travel mm Tolerance mm	: 1.00	+ Tolerance 1/min : + 15
Tolerance mm	: +- 0.20	+ Check
Rated speed rpm	• 500	speed 1/min : +- 20
		rack travel mm : 0.50
guide sleeve travel mm Tolerance mm	: 2.80	+ Tolerance mm : + 0.50
Tolerance mm	: ← 0.30	Rated speed rpm : 1350
Rated speed rpm	: 1350	rack travel mm : 4.00
guide sleeve	• 11 50	İ
guide sleeve travel mma Tolerance mm	: + 0.50	Į
		LOW IDLE
GUIDE SLEEVE POST	ITION	+

control lever position degree : 67.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 100 CRT mm min. : > 7.70 Testing: Rated speed rpm : 300 6,20 rack travel mm : : +- 0.10 Tolerance mm Rated speed rpm : 430 TORQUE CONTROL Rated speed rpm : 1100 rack travel mm : 10.35 : +- 0.05 Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST SETTING 500 Rated speed rpm : Pressure hPa 700 rack travel mm : 10.35 Tolerance mm : +- 0.05 Rated speed rpm : 500 Pressure hPa 9.05 rack travel mm : + - 0.15Tolerance mm **MEASUREMENT** 500 Rated speed rpm : 430 Pressure hPa 9.50 rack travel mm : ← 0.10 Tolerance mm : 465 Pressure hPa 9.95 rack travel mm : : **←** 0.05 Tolerance mm

Check speed 1/min :> AN. FUEL DELIVERY CHARACTERISTICS Aneroid pressure ከPa Rated speed rpm : 1100 Del. quantity cm3/1000 strokes : 97.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 3.5 STARTING FUEL DELIVERY ESS test: With 24 V solenoid activated, rack must reach start position in max. control lever setting. Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 230.0 Tolerance cm3/1000 strokes : +- 15.0 Check tolerance : +- 19.0 cm3/1000s. LOW IDLE Rated speed rpm : 300 Rack travel in mm : 6.20 Tolerance mm : \leftarrow 0.10 Del. quantity cm3/1000 strokes : 15.5 Tolerance cm3/1000 strokes : +- 2.5 Check tolerance : +- 5.0 cm3/1000s. Spreed Tolerance cm3/1000 strokes : 4.5 Check tolerance cm3/1000s. 7.5

End of test specification sheet

Start interlock

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 03.07.97 Edition : ISO 4113 Test oil

Combination No. : 0 402 076 801

Injection pump

Pump designation : PES6P120A1320/5RS337

: 2Y EP type number : 0 412 026 793

Governor

Governer design. : RSV350...1050P1A641

Governer no. : 0 421 833 553

Cust. part No. : 1382923

Customer-spec. information

Customer : SCANIA

Motor : DSI1172A,-C1157A

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Vibration

damper

(RoBo diaphragm) : 3.1

Test oil inlet

: 40 temp. °C Tolerance *C : + 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 2.5 Tolerance bar : ← 0.1

Test nozzle holde

: 1 688 901 104 assembly

Opening pressure

: 251.5 bar Tolerance bar : + 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : x Length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 4.45 Tolerance mm : +- 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm: 10.50

Tolerance mm : + 1.50

Firing order : 1-5-3-6-2

: - 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.30

Check

tolerance *NW : +- 0.75

Start of delivery mark

Tolerance : \leftarrow 0.10

Check

tolerance °NW : + 0.75

Barrel no. : 1

BASIC SETTING

	4
Rack travel in mm: 16.75	Rated speed rpm : 700
Tolerance mm : +- 0.05	+ Aneroid pressure + hPa : 1500
Del. quantity cm3/1000 strokes : 263.0	Del. quantity cm3/1000 strokes : 263.0
	+ Tolerance
Tolerance cm3/1000 strokes : + 1.0	- cm3/1000 strokes : +- 1.0 - Check tolerance - cm3/1000s. : +- 4.0
Check tolerance cm3/1000s. : + 4.0	+ Spreed + Tolerance
Spreed	cm3/1000 strokes : 8.0 Check tolerance
Tolerance	+ cm3/1000s. : 12.0
cm3/1000 strokes : 8.0	<u> </u>
Check tolerance cm3/1000s. : 12.0	CONTROL LEVER
***************************************	control lever
	position degree : 33.0
	+ tolerance degree : +- 4.0 +
Rack travel in mm: 6.00	- control lever
Tolerance mm : +- 0.20	+ position degree : 83.0
Del. quantity cm3/1000 strokes : 20.0	tolerance degree : + 4.0
Tolerance	+
cm3/1000 strokes : + 4.0	+ ASSEMBLY GOVERNOR SETTING
Check tolerance cm3/1000s. : +- 6.0	Rated speed rpm : 750
Spreed	rack travel mm : 15.70
Tolerance cm3/1000 strokes : 5.0	Poted anad an . 700
cm3/1000 strokes : 5.0 Check tolerance	+ Rated speed rpm : 788 + Tolerance 1/min : +- 4
cm3/1000s. : 9.0	rack travel mm : 4.00
ADS CETTAIN OF THE CETTAIN CHIMD	rack travel mm : 0.85
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Tolerance mm : +- 0.55 Rated speed rpm : 850
WITH GOVERNOON	+
	Rated speed rpm : 751
GUIDE SLEEVE POSITION	rack travel mm : 15.70
	Rated speed rpm : 789
control lever	+ Tolerance 1/min : +- 4
position degree : - 3	rack travel mm : 4.00
Rated speed rpm : 800	+ rack travel mm : 0.85
Rack travel in mm: 0.50	Tolerance mm : + 0.55
Tolerance mm : +- 0.20	Rated speed rpm : 850
governor coring	İ
governor spring pre-tension	Rated speed rpm : 752
click setting x : 2.00	rack travel mm : 15.70
	Poted one-disease 700
FULL LOAD DELIVERY AT FULL LOAD STOP	+ Rated speed rpm : 790 + Tolerance 1/min : +- 4
FULL LUMD DELIVERT MI FULL LUMD STOP	T lordiging lymin

rack travel mm	: 4.00
rack travel mm	: 0.85
Tolerance mm	: +- 0.55
Rated speed rpm	: 850
Rated speed rpm	: 753
rack travel mm	: 15.70
Rated speed rpm	: 791
Tolerance 1/min	: - 4
rack travel mm	: 4.00
rack travel mm	: 0.85
Tolerance mm	: 0.85 : +- 0.55 : 850
Rated speed rpm	: 850
Rated speed rpm	: 754 : 15.70
rack travel mm	: 15.70
Rated speed rpm	: 792
Tolerance 1/min rack travel mm	: 792 : +- 4 : 4.00
rack travet min	; 4.00
rack travel mm	: 0.85
Tolerance mm Rated speed rpm	: 0.85 : +- 0.55 : 850
Rated Speed (pill	. 000
Dated aread non	: 755
Rated speed rpm rack travel mm	
Rated speed rpm Tolerance 1/min	
rack travel mm	4.00
rack travel mm Tolerance mm	: 0.85 : +- 0.55
Rated speed rpm	850
TORQUE CONTROL	. 760
Rated speed rpm rack travel mm	: 700 : 16.75
Tolerance mm	· + 0.05
ANEROID/ALTITUDE	
COMPENSATOR TEST	
SETTING	
Rated speed rpm	: 500
Pressure hPa	: 1500
	: 500 : 1500 : 16.75 : +- 0.05

Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 13.50 : +- 0.20	
MEASUREMENT		
Rated speed rpm	: 500	
Pressure hPa rack travel mm Tolerance mm	: 295 : 14.30 : ← 0.20	
Pressure hPa rack travel mm Tolerance mm	: 640 : 16.00 : + 0.05	
FUEL DELIVERY CHA	RACTERISTICS	
Aneroid pressure	• _	
hPa Rated speed rpm	: - : 500	
hPa Rated speed rpm Del. quantity cm3/1000 strokes	: 500	
hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: 500 : 188.0	
hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance	: 500 : 188.0	
hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: 500 : 188.0 : + 1.0 : + 4.0	
hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. STARTING FUEL DEL Rated speed rpm	: 500 : 188.0 : + 1.0 : + 4.0 IVERY : 100	
hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. STARTING FUEL DEL Rated speed rpm rack travel mm Tolerance mm	: 500 : 188.0 : + 1.0 : + 4.0	
hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. STARTING FUEL DEL Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes	: 500 : 188.0 : + 1.0 : + 4.0 IVERY : 100 : 13.50	
hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. STARTING FUEL DEL Rated speed rpm rack travel mm Tolerance mm Del. quantity	: 500 : 188.0 : + 1.0 : + 4.0 IVERY : 100 : 13.50 : + 0.20	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 21.04.97 Test oil : ISO 4113

Combination No. : 0 402 076 802

Injection pump

Pump designation : PES6P120A1320/5RS337

: 3

EP type number : 0 412 026 794

Governor

Governer design. : RSV350...1050P8A643

Governer no. : 0 421 833 555

Cust. part No. : 1385930

Customer-spec. information

Customer : SCANIA

Motor : DSI1171A,-C1156A

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Vibration

damper

(RoBo diaphragm) : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 104

Opening pressure

bar : 251.5 Tolerance bar : + 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 4.45
Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

• 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.50

Check

tolerance °NW : + 0.75

Start of delivery mark

Tolerance : + 0.30

Check

tolerance *NW : +- 0.75

Barrel no. : 1

BASIC SETTING

_	
Rack travel in mm: 15.35 Tolerance mm: + 0.05	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700
Del. quantity cm3/1000 strokes : 226.0	Rated speed rpm : 700 Aneroid pressure hPa : 1500
Tolerance	Del. quantity cm3/1000 strokes : 226.0
cm3/1000 strokes : + 1.0	Tolerance cm3/1000 strokes : +- 1.0
Check tolerance cm3/1000S. : +- 7.0	Check tolerance cm3/1000s. : +- 7.0 Spreed
Spreed	Tolerance cm3/1000 strokes : 8.0
Tolerance cm3/1000 strokes : 8.0	Check tolerance cm3/1000s. : 12.0
Check tolerance cm3/1000s. : 12.0	CONTROL LEVED
 ‡	CONTROL LEVER
Rated speed rpm : 350	control lever position degree : 54.0 tolerance degree : +- 4.0
Rack travel in mm: 5.10 + Tolerance mm: + 0.10 +	control lever
Del. quantity	position degree : 104.0
cm3/1000 strokes : 18.0	tolerance degree : +- 4.0
cm3/1000 strokes : + 3.0 Check tolerance	RATED SPEED rack travel mm : 14.30
cm3/1000s. : +- 6.0	Rated speed rpm : 1095
Spreed + Tolerarice +	Tolerance 1/min : +- 5 Check
cm3/1000 strokes : 4.0 + Check tolerance +	speed 1/min : +- 10
cm3/1000s. : 8.0	rack travel mm : 4.00 Rated speed rpm : 1195
(D) CETTING OF THUESTIAN DUMP	Tolerance 1/min : + 15 Check
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	speed 1/min : +- 20
#	rack travel mm : 0.85
GUIDE SLEEVE POSITION	Tolerance mm : +- 0.55 Rated speed rpm : 1350
doing serve root root	,
control lever	rack travel mm : 4.00 Rated speed rpm : 1215
position degree : -3	Tolerance 1/min : +- 15
Rated speed rpm : 800	Check speed 1/min : +- 20
Rack travel in mm: 0.50 Tolerance mm: + 0.20	
governor spring	LOW IDLE
pre-tension + click setting x : 6.00 +	COM INCE
+	

control lever position degree tolerance degree	
control lever position degree tolerance degree	: 23.0 : +- 4.0
Setting point w/o	ut bumper spring
Rated speed rpm rack travel mm Tolerance mm	: 350 : 4.60 : ← 0.10
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 350 : 5.10 : ← 0.10
rack travel mm Rated speed rpm Tolerance 1/min	: 2.00 : 555 : + 30
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 700 : 15.35 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 1050 : 15.35 : ← 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1500 : 15.35 : +- 0.05
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 12.10 : + 0.20
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 510 : 13.10 : + 0.20
roterance um	0.20

Pressure hPa rack travel mm Tolerance mm	: 780 : 14.50 : +- 0.05
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 209.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000S.	
STARTING FUEL DEL	IVERY
Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 12.10 : + 0.20 : 165.0
LOW IDLE	
LOW IDLE Rated speed rpm	: 350

Tolerance

cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 08.08.97 : ISO 4113

Combination No. : 0 402 086 702

Injection pump

Pump designation: PES6P1008321RS3388 EP type number : 0 412 006 714

Governor

Governer design. : RSV400...1125PCA674

Governer no. : 0 421 833 592

Cust. part No. : 51.11103-7564

Customer-spec. information

Customer : MAN

: DO826 LE531 Motor

Power KW

: 191.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

40 temp. °C Tolerance °C : + 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : Tolerance bar : + 0.1

Overflow quantity

: 150 min. L/h Tolerance L/h : +- 10.0

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 bar : **←** 1.5 Tolerance bar

Test Lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

: 3.30 Prestroke mm : + 0.05 Tolerance mm

Check

: +- 0.10 tolerance mm

Rack travel in mm : 13.50 Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

: 0-60-120-180-240 Phasing

: -300

: +- 0.50 Tolerance

Check

tolerance 'NW : +- 0.75

Start of delivery blocking

: +- 0.10 Tolerance

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

Barrel no. : 1

BASIC SETTING

	†
Rack travel in mm: 14.10	FILL LOAD DELTHERY AT THE ACTOR
Tolerance mm : +- 0.05	FULL LOAD DELIVERY AT FULL LOAD STOP
-	†
Del. quantity	Rated speed rpm : 925
cm3/1000 strokes : 174.0 -	Aneroid pressure
	+ hPa : 1500
Tolerance -	+ Del. quantity
cm $3/1000$ strokes : $+-$ 1.0	├ cm3/1000 strokes : 174.0
	† Tolerance
Check tolerance -	+ cm3/1000 strokes : +- 1.0
cm3/1000s. : +- 4.0	+ Check tolerance
	+ cm3/1000s. : +- 4.0
Spreed -	Spreed
	Tolerance
Tolerance	cm3/1000 strokes : 4.0
cm3/1000 strokes : 4.0	Check tolerance
- The state of the	- cm3/1000s. : 6.0
Check tolerance	1
cm3/1000s. : 6.0	
· · · · · · · · · · · · · · · · · · ·	
Name and the state of the state	CONTROL LEVER
	I CONTROL LEVER
Rated speed rpm : 400	control lever
Mateu Speed (pill : 400	position degree : 104.0
Dook Showed Some 4 00	
Rack travel in mm: 4.90	tolerance degree : +- 4.0
Tolerance mm : + 0.10	1 0000
Del. quantity	+ RATED SPEED
cm3/1000 strokes : 25.0	rack travel mm : 12.60
Tolerance	Rated speed rpm : 1175
cm $3/1000$ strokes : \leftarrow 3.0	Tolerance 1/min : +- 5
Check tolerance	
$cm3/1000s.$: \leftarrow 6.0	† rack travel mm : 4.00
Spreed -	+ Rated speed rpm : 1265
Tolerance	+ Tolerance 1/min : +- 15
cm3/1 000 strokes : 3.5	+
Check tolerance	rack travel mm : 0.85
cm3/1000s. : 5.5	→ Tolerance mm : ← 0.55
	Rated speed rpm : 1400
	+
(B) SETTING OF INJECTION PUMP	rack travel mm : 4.00
WITH GOVERNOR	Rated speed rpm : 1270
	Tolerance 1/min : + 15
	1
GUIDE SLEEVE POSITION	1
	LOW IDLE
control lever	+
position degree : - 3	+
Rated speed rpm : 800	+ control lever
man to the part of the control of th	position degree : 80.0
Rack travel in mm: 0.50	tolerance degree : +- 4.0
Tolerance mm : + 0.20	1
TO COT OFFICE HIRD	Setting point w/out bumper spring
governor spring	Toccord bottle wood bumper spring
	Rated speed rpm : 400
pre-tension	rack travel mm : 4.40
click setting x : 5.00	Tolerance mm : 4.40
•	Tolerance mm : +- 0.10
	<u></u>

Testing:

Rated speed rpm : 400 rack travel mm : 4.90 Tolerance mm : + 0.10

rack travel mm : 2.00
Rated speed rpm : 500
Tolerance 1/min : + 30

TORQUE CONTROL

Rated speed rpm : 925 rack travel mm : 14.10 Tolerance ma : +- 0.05

Rated speed rpm : 1125
rack travel mm : 13.60
Tolerance mm : + 0.05

Rated speed rpm : 700 rack travel mm : 14.15 Tolerance mm : + 0.10

Rated speed rpm : 1025 rack travel mm : 13.95 Tolerance mm : +- 0.10

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 1500
rack travel mm : 14.10
Tolerance mm : +- 0.15

Rated speed rpm : 500
Pressure hPa : rack travel mm : 9.70
Tolerance mm : +- 0.10

MEASUREMENT

Rated speed rpm : 500

Pressure hPa : 150 rack travel mm : 10.00 Tolerance mm : +- 0.05

Pressure hPa : 800 rack travel mm : 13.30 Tolerance mm : +- 0.15

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : 1500 Rated speed rpm : 1125

Del. quantity

cm3/1000 strokes : 161.0

Tolerance

cm3/1000 strokes : \leftarrow 3.0

Check tolerance

cm3/1000s. : +- 6.0

Aneroid pressure

hPa : 1500 Rated speed rpm : 700

Del. quantity

cm3/1000 strokes : 187.0

Tolerance

cm3/1000 strokes : +- 3.0

Check tolerance

cm3/1000s. : +- 6.0

Aneroid pressure

hPa : Rated speed rpm : 500
Del. quantity

cm3/1000 strokes : 91.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +- 4.0

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 9.70 Tolerance mm : +- 0.20

Del. quantity

cm3/1000 strokes : 112.0

Tolerance

cm3/1000 strokes : \leftarrow 10.0

Check tolerance

cm3/1000s. : +- 14.0

LOW IDLE

Rated speed rpm : 400

Rack travel in mm: 4.90 Tolerance mm: +- 0.10 Del. quantity

Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed	: +- : +-	3.0 6.0
Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	:	3.5 5.5

Note remarks

Refer to Service Info for test and adjustment instructions.

See microcard(s) W400/...

Edition : 12.08.97 Test oil : ISO 4113

Combination No. : 0 402 736 889

Injection pump

Pump designation : PES6P120A120RS7390

EP type number : 0 412 726 945

Governor

Governer design. : RQV350...1100PA1244K

Governer no. : 0 421 815 477

Cust. part No. : 3283279

Customer-spec. information Customer : CUMMINS Motor : 6CTAA Power KW : 179.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40 : +- 2.0 Tolerance °C

Overflow valve : 2 417 413 093

Inlet press. bar : 1.5

Overflow quantity

min. L/h : 90 Tolerance L/h : + 10.0

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

: 208.5 bar Tolerance bar : + 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 3.30 Tolerance mm : +- 0.05

Check

: +- 0.10 tolerance mm

Rack travel in mm: 20.50 Tolerance mm : +- 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance *NW : + 0.75

Start of delivery blocking

*NW after s.o.d. : 7.70

: +- 0.10 Tolerance Check

tolerance *NW : +- 0.75

Barrel no. : 1

BASIC SETTING

+	
Rack travel in mm: 13.70	Rated speed rpm : 420
Tolerance mm : +- 0.05 +	guide sleeve
	travel mm : 4.28
Del. quantity +	Tolerance mm : +- 0.25
cm3/1000 strokes : 173.0	
	Rated speed rpm : 1380
Tolerance	guide sleeve
cm3/1000 strokes : + 1.0 +	travel mm : 13.50
	Tolerance mm : +- 0.50
Check tolerance +	
cm3/1000s. : + 4.0	
	GUIDE SLEEVE POSITION
Spreed	
Talamana	annhard forms
Tolerance 5.0	control lever
cm3/1000 strokes : 5.0	position degree : - 1
the set the leavest the second	Rated speed rpm : 1195
Check tolerance + cm3/1000s. : 9.0	Rack travel in mm : 12.00
cm3/1000s. : 9.0	Tolerance mm : +- 2.00
	isterance nm : == 2.00
I	
Rated speed rpm : 350	FULL LOAD DELIVERY AT FULL LOAD STOP
Traced Speed 1 pm 1 333	TOLK COMP DECEMENT IN TOLK COMP OF OF
Rack travel in mm: 4.60	Rated speed rpm : 1100
Tolerance mm : + 0.10	Aneroid pressure
Del. quantity	hPa : 1500
cm3/1000 strokes : 18.0	Del. quantity
Tolerance	cm3/1000 strokes : 173.0
cm3/1000 strokes : +- 3.0	Tolerance
Check tolerance	cm3/1000 strokes : +- 1.0
cm3/1000s. : + 5.0	Check tolerance
Spreed	cm3/1000s. : +- 4.0
Tolerance	Spreed
cm3/1000 strokes : 7.0	Tolerance
Check tolerance	cm3/1000 strokes : 5.0
cm3/1000s. : 11.0	Check tolerance
(1137 10003.	cm3/1000s. : 9.0
1	. , , , ,
(B) SETTING OF INJECTION PUMP	
WITH GOVERNOR +	
+	CONTROL LEVER
OUT DE CONTROL TO A UTIL	
GUIDE SLEEVE TRAVEL	control lever
Dated aread are : 4450	position degree : 68.0
Rated speed rpm : 1159	tolerance degree : +- 4.0
guide sleeve	annhard dayon
travel mm : 10.27	control lever
Tolerance mm : + 0.15	position degree : 122.0
Rated speed rom : 350	tolerance degree : +- 4.0
The second secon	RATED SPEED
guide steeve	
travel mm : 1.93	
Tolerance mm : ← 0.20	the second secon
Rated speed rom : 710	Tolerance 1/min : +- 5
The second secon	rack travel mm : 4.00
guide sleeve + travel mm : 5.79 +	Rated speed rpm : 1240
	Tolerance 1/min : +- 15
Tolerance mm : +- 0.25 +	TOLETANCE TAIRIN . TO 13

Check	†
speed 1/min : +- 20	+ Rated speed rpm : 700
	+ Pressure hPa : -
rack travel mm : 0.50	rack travel mm : 10.40
Tolerance mm : + 0.50 Rated speed rpm : 1350	† Tolerance mm : +- 0.20
Rated Speed (pill . 1000	T MEASUREMENT
	THE MOST ACTION AND A STATE OF THE ACTION AN
	Rated speed rpm : 700
	+ - 12
LOW IDLE	+ Pressure hPa : 400
	+ rack travel mm : 11.70 + Tolerance mm : +- 0.20
control lever	Total discountry
position degree : 74.0	Pressure hPa : 600
tolerance degree : + 4.0	rack travel mm : 13.30
	+ Tolerance mm : +- 0.05
control lever	†
position degree : 20.0 tolerance degree : +- 4.0	Start interlock
toterance degree 4.0	T Start Micertock
Setting point w/out bumper spring	+ Rated speed rpm : > 100
	Rated speed rpm : < 290
Rated speed rpm : 250	+
2.50	+ Check
CRT man min. $: > 7.50$	+ speed 1/min :> 80 + Check
Testing:	speed 1/min : < 300
resemg.	+
- · · · · · · · · · · · · · · · · · · ·	1
Rated speed rpm : 350	
rack travel mm : 4.60	FUEL DELIVERY CHARACTERISTICS
	FUEL DELIVERY CHARACTERISTICS
rack travel mm : 4.60 Tolerance mm : +- 0.10	+
rack travel mm : 4.60	Aneroid pressure
rack travel mm : 4.60 Tolerance mm : +- 0.10	+
rack travel mm : 4.60 Tolerance mm : + 0.10 Rated speed rpm : 350 TORQUE CONTROL	Aneroid pressure hPa : 1500 Rated speed rpm : 700 Del. quantity
rack travel mm : 4.60 Tolerance mm : + 0.10 Rated speed rpm : 350 TORQUE CONTROL Rated speed rpm : 1100	Aneroid pressure hPa : 1500 Rated speed rpm : 700 Del. quantity cm3/1000 strokes : 171.0
rack travel mm : 4.60 Tolerance mm : + 0.10 Rated speed rpm : 350 TORQUE CONTROL Rated speed rpm : 1100 rack travel mm : 13.70	Aneroid pressure hPa : 1500 Rated speed rpm : 700 Del. quantity cm3/1000 strokes : 171.0 Tolerance
rack travel mm : 4.60 Tolerance mm : + 0.10 Rated speed rpm : 350 TORQUE CONTROL Rated speed rpm : 1100	Aneroid pressure hPa : 1500 Rated speed rpm : 700 Del. quantity cm3/1000 strokes : 171.0 Tolerance cm3/1000 strokes : +- 3.0
rack travel mm : 4.60 Tolerance mm : + 0.10 Rated speed rpm : 350 TORQUE CONTROL Rated speed rpm : 1100 rack travel mm : 13.70 Tolerance mm : + 0.05	Aneroid pressure hPa : 1500 Rated speed rpm : 700 Del. quantity cm3/1000 strokes : 171.0 Tolerance cm3/1000 strokes : +- 3.0 Check tolerance
rack travel mm : 4.60 Tolerance mm : + 0.10 Rated speed rpm : 350 TORQUE CONTROL Rated speed rpm : 1100 rack travel mm : 13.70	Aneroid pressure hPa : 1500 Rated speed rpm : 700 bel. quantity cm3/1000 strokes : 171.0 Tolerance cm3/1000 strokes : +- 3.0 Check tolerance
rack travel mm : 4.60 Tolerance mm : + 0.10 Rated speed rpm : 350 TORQUE CONTROL Rated speed rpm : 1100 rack travel mm : 13.70 Tolerance mm : + 0.05 Rated speed rpm : 700	Aneroid pressure hPa : 1500 Rated speed rpm : 700 Del. quantity cm3/1000 strokes : 171.0 Tolerance cm3/1000 strokes : +- 3.0 Check tolerance cm3/1000s. : +- 6.0 Spreed Tolerance
rack travel mm : 4.60 Tolerance mm : + 0.10 Rated speed rpm : 350 TORQUE CONTROL Rated speed rpm : 1100 rack travel mm : 13.70 Tolerance mm : + 0.05 Rated speed rpm : 700 rack travel mm : 13.85 Tolerance mm : + 0.10	Aneroid pressure hPa : 1500 Rated speed rpm : 700 bel. quantity cm3/1000 strokes : 171.0 Tolerance cm3/1000 strokes : +- 3.0 Check tolerance cm3/1000s. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 8.0
rack travel mm : 4.60 Tolerance mm : + 0.10 Rated speed rpm : 350 TORQUE CONTROL Rated speed rpm : 1100 rack travel mm : 13.70 Tolerance mm : + 0.05 Rated speed rpm : 700 rack travel mm : 13.85 Tolerance mm : + 0.10 Rated speed rpm : 500	Aneroid pressure hPa : 1500 Rated speed rpm : 700 bel. quantity cm3/1000 strokes : 171.0 Tolerance cm3/1000 strokes : +- 3.0 Check tolerance cm3/1000s. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance
rack travel mm : 4.60 Tolerance mm : + 0.10 Rated speed rpm : 350 TORQUE CONTROL Rated speed rpm : 1100 rack travel mm : 13.70 Tolerance mm : + 0.05 Rated speed rpm : 700 rack travel mm : 13.85 Tolerance mm : + 0.10 Rated speed rpm : 500 rack travel mm : 12.95	Aneroid pressure hPa : 1500 Rated speed rpm : 700 bel. quantity cm3/1000 strokes : 171.0 Tolerance cm3/1000 strokes : +- 3.0 Check tolerance cm3/1000s. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 8.0
rack travel mm : 4.60 Tolerance mm : + 0.10 Rated speed rpm : 350 TORQUE CONTROL Rated speed rpm : 1100 rack travel mm : 13.70 Tolerance mm : + 0.05 Rated speed rpm : 700 rack travel mm : 13.85 Tolerance mm : + 0.10 Rated speed rpm : 500	Aneroid pressure hPa : 1500 Rated speed rpm : 700 bel. quantity cm3/1000 strokes : 171.0 Tolerance cm3/1000 strokes : +- 3.0 Check tolerance cm3/1000s. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance
rack travel mm : 4.60 Tolerance mm : + 0.10 Rated speed rpm : 350 TORQUE CONTROL Rated speed rpm : 1100 rack travel mm : 13.70 Tolerance mm : + 0.05 Rated speed rpm : 700 rack travel mm : 13.85 Tolerance mm : + 0.10 Rated speed rpm : 500 rack travel mm : 12.95	Aneroid pressure hPa : 1500 Rated speed rpm : 700 bel. quantity cm3/1000 strokes : 171.0 Tolerance cm3/1000 strokes : +- 3.0 Check tolerance cm3/1000s. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance
rack travel mm : 4.60 Tolerance mm : + 0.10 Rated speed rpm : 350 TORQUE CONTROL Rated speed rpm : 1100 rack travel mm : 13.70 Tolerance mm : + 0.05 Rated speed rpm : 700 rack travel mm : 13.85 Tolerance mm : + 0.10 Rated speed rpm : 500 rack travel mm : 12.95 Tolerance mm : + 0.15	Aneroid pressure hPa : 1500 Rated speed rpm : 700 Del. quantity cm3/1000 strokes : 171.0 Tolerance cm3/1000 strokes : +- 3.0 Check tolerance cm3/1000s. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 12.0 Aneroid pressure hPa : -
rack travel mm : 4.60 Tolerance mm : + 0.10 Rated speed rpm : 350 TORQUE CONTROL Rated speed rpm : 1100 rack travel mm : 13.70 Tolerance mm : + 0.05 Rated speed rpm : 700 rack travel mm : 13.85 Tolerance mm : + 0.10 Rated speed rpm : 500 rack travel mm : 12.95 Tolerance mm : + 0.15	Aneroid pressure hPa : 1500 Rated speed rpm : 700 Del. quantity cm3/1000 strokes : 171.0 Tolerance cm3/1000 strokes : +- 3.0 Check tolerance cm3/1000s. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 8.0 Aneroid pressure hPa : - Rated speed rpm : 500
rack travel mm : 4.60 Tolerance mm : + 0.10 Rated speed rpm : 350 TORQUE CONTROL Rated speed rpm : 1100 rack travel mm : 13.70 Tolerance mm : + 0.05 Rated speed rpm : 700 rack travel mm : 13.85 Tolerance mm : + 0.10 Rated speed rpm : 500 rack travel mm : 12.95 Tolerance mm : + 0.15	Aneroid pressure hPa : 1500 Rated speed rpm : 700 Del. quantity cm3/1000 strokes : 171.0 Tolerance cm3/1000 strokes : +- 3.0 Check tolerance cm3/1000s. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity
rack travel mm : 4.60 Tolerance mm : + 0.10 Rated speed rpm : 350 TORQUE CONTROL Rated speed rpm : 1100 rack travel mm : 13.70 Tolerance mm : + 0.05 Rated speed rpm : 700 rack travel mm : 13.85 Tolerance mm : + 0.10 Rated speed rpm : 500 rack travel mm : 12.95 Tolerance mm : + 0.15 ANEROID/ALTITUDE COMPENSATOR TEST	Aneroid pressure hPa : 1500 Rated speed rpm : 700 Del. quantity cm3/1000 strokes : 171.0 Tolerance cm3/1000 strokes : +- 3.0 Check tolerance cm3/1000s. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 12.0 Aneroid pressure hPa : Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 104.5
rack travel mm : 4.60 Tolerance mm : + 0.10 Rated speed rpm : 350 TORQUE CONTROL Rated speed rpm : 1100 rack travel mm : 13.70 Tolerance mm : + 0.05 Rated speed rpm : 700 rack travel mm : 13.85 Tolerance mm : + 0.10 Rated speed rpm : 500 rack travel mm : 12.95 Tolerance mm : + 0.15	Aneroid pressure hPa : 1500 Rated speed rpm : 700 Del. quantity cm3/1000 strokes : 171.0 Tolerance cm3/1000 strokes : +- 3.0 Check tolerance cm3/1000s. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 12.0 Aneroid pressure hPa : Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 104.5 Tolerance
rack travel mm : 4.60 Tolerance mm : + 0.10 Rated speed rpm : 350 TORQUE CONTROL Rated speed rpm : 1100 rack travel mm : 13.70 Tolerance mm : + 0.05 Rated speed rpm : 700 rack travel mm : 13.85 Tolerance mm : + 0.10 Rated speed rpm : 500 rack travel mm : 12.95 Tolerance mm : + 0.15 ANEROID/ALTITUDE COMPENSATOR TEST	Aneroid pressure hPa : 1500 Rated speed rpm : 700 Del. quantity cm3/1000 strokes : 171.0 Tolerance cm3/1000 strokes : +- 3.0 Check tolerance cm3/1000s. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 12.0 Aneroid pressure hPa : Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 104.5
rack travel mm : 4.60 Tolerance mm : + 0.10 Rated speed rpm : 350 TORQUE CONTROL Rated speed rpm : 1100 rack travel mm : 13.70 Tolerance mm : + 0.05 Rated speed rpm : 700 rack travel mm : 13.85 Tolerance mm : + 0.10 Rated speed rpm : 500 rack travel mm : 12.95 Tolerance mm : + 0.15 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 700 Pressure hPa : 1500	Aneroid pressure hPa : 1500 Rated speed rpm : 700 bel. quantity cm3/1000 strokes : 171.0 Tolerance cm3/1000s. :+- 3.0 Check tolerance cm3/1000s. :+- 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 Aneroid pressure hPa : Rated speed rpm : 500 bel. quantity cm3/1000 strokes : 104.5 Tolerance cm3/1000 strokes :+- 2.0
rack travel mm : 4.60 Tolerance mm : + 0.10 Rated speed rpm : 350 TORQUE CONTROL Rated speed rpm : 1100 rack travel mm : 13.70 Tolerance mm : + 0.05 Rated speed rpm : 700 rack travel mm : 13.85 Tolerance mm : + 0.10 Rated speed rpm : 500 rack travel mm : 12.95 Tolerance mm : + 0.15 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 700 Pressure hPa : 1500 rack travel mm : 13.85	Aneroid pressure hPa : 1500 Rated speed rpm : 700 bel. quantity cm3/1000 strokes : 171.0 Tolerance cm3/1000s. : +- 3.0 Check tolerance cm3/1000s. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 Aneroid pressure hPa : Rated speed rpm : 500 bel. quantity cm3/1000 strokes : 104.5 Tolerance cm3/1000 strokes : +- 2.0 Check tolerance
rack travel mm : 4.60 Tolerance mm : + 0.10 Rated speed rpm : 350 TORQUE CONTROL Rated speed rpm : 1100 rack travel mm : 13.70 Tolerance mm : + 0.05 Rated speed rpm : 700 rack travel mm : 13.85 Tolerance mm : + 0.10 Rated speed rpm : 500 rack travel mm : 12.95 Tolerance mm : + 0.15 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 700 Pressure hPa : 1500	Aneroid pressure hPa : 1500 Rated speed rpm : 700 bel. quantity cm3/1000 strokes : 171.0 Tolerance cm3/1000s. : +- 3.0 Check tolerance cm3/1000s. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 Aneroid pressure hPa : Rated speed rpm : 500 bel. quantity cm3/1000 strokes : 104.5 Tolerance cm3/1000 strokes : +- 2.0 Check tolerance

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : + 0.50 Del. quantity cm3/1000 strokes : 190.0 Tolerance cm3/1000 strokes : + 20.0 Check tolerance cm3/1000s. : + 24.0

LOW IDLE

Rated speed rpm : 350 Rack travel in mm: 4.60 Tolerance mm : +- 0.10 Del. quantity cm3/1000 strokes : 18.0 Tolerance cm3/1000 strokes : \leftarrow 3.0 Check tolerance : +- 5.0 cm3/1000s. Spreed Tolerance cm3/1000 strokes : 7.0 Check tolerance cm3/1000s. : 11.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 07,08,97 Edition Test oil : ISO 4113

Combination No. : 0 402 846 060

Injection pumpo

Pump designation : PE6P120A320RS8015 EP type number : 0 412 826 016

Governor

Governer design. : RQV300...1050PA1141

Governer no. : 0 421 814 091

Cust. part No. : 11031819

: -P03 V. 2.95

Customer-spec. information

Customer : VCE

: TD122KFE-P5880 Motor

Power KW : 296.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

: 40 temo. °C : + 2.0 Tolerance °C

Overflow valve : 2 417 413 078

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 103 assembly

Opening pressure

: 208.5 bar Tolerance bar : + 1.5

Test Lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x Length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : ← 1.0

Prestroke mm : 4.00 Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm: 10.50 Tolerance mm : +- 0.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

: **←** 0.50 Tolerance

Check

tolerance *NW : + 0.75

Start of delivery mark

Tolerance : \leftarrow 0.50

Check

tolerance *NW : + 0.75

Barrel no. : 1

		+ Tolerance mm : +- 0.20
BASIC SETTING		
		🕂 guide sleeve
Rated speed rpm	: 700	travel mm : 6.98
, ,		+ Tolerance mm : + 0.25
Rack travel in mm		Rated speed rpm : 490
olerance mm	: ← 0.05	guide sleeve travel mm : 4.65
el. quantity		+ Tolerance mm : + 0.25
/1000 strokes	: 298.0	+
		+ Rated speed rpm : 1300
erance		+ guide sleeve
1000 strokes	: + 1.0	+ travel mm : 11.50 + Tolerance mm : +- 0.50
ck tolerance		+ Oction in
3/10 0 0s.	: ← 4.0	CHANG OF EARLY DOCKTON
eed		GUIDE SLEEVE POSITION
lerance		t control lever
Terance 3/1000 strokes	. • ^	
or ludy strokes	: 8.0	+ position degree : - 1
ck tolerance	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	† Rated speed rpm : 1190
ick tolerance 5/1000s.	: 11.0	Rack travel in mm: 9.50
mons.	: 11,0	
		+ Tolerance mm : +- 1.30
1	725	First 1000 SELTIFON AT FIRST COOR
ed speed rpm	: 325	FULL LOAD DELIVERY AT FULL LOAD STOP
c travel in mo	3.80	Rated speed rpm : 700
ance mm		+ Aneroid pressure
ice iiiii iantity		hPa : 1500
	: 23.0	Del. quantity
ance	. 25.0	cm3/1000 strokes : 298.0
	: +- 3.0	Tolerance
tolerance	. · · J.U	+ cm3/1000 strokes : +- 1.0
	: ← 6.0	tms/1000 strokes : +- 1.0
	0.0	• • • • • • • • • • • • • • • • • • •
ed		
ance		+ Spreed
1000 strokes	: 5.0	+ Tolerance
tolerance	. 00	+ cm3/1000 strokes : 3.0
os.	: 8.0	+ Check tolerance + cm3/1000s. : 11.0
		+
	JECTION PUMP	İ
H GOVERNOR		CONTROL LEVER
NE CLERKE TON	<u></u>	
DE SLEEVE TRAV	EL	+ control lever + position degree : 62.0
d speed sp=	: 1121	tolerance degree : +- 4.0
ed speed rpm	. 1121	T coterance degree : ** 4.0
e steeve	: 8.44	T control lever
et mm		
ance mm	: +- 0.15	<pre>position degree : 122.0 tolerance degree : + 4.0</pre>
d speed rpm	: 325	+
de sleeve		+ RATED SPEED
el mm	: 2.04	+ rack travel mm : 10.30

Rated speed rpm Tolerance 1/min	: 1110 : + 5
rack travel mm Rated speed rpm Tolerance 1/min	: 4.00 : 1160 : + 15
rack travel mm Tolerance mm Rated speed rpm	: 0.50 : +- 0.50 : 1260
LOW IDLE	
control lever position degree tolerance degree	: 64.0 : + 4.0
control lever position degree tolerance degree	: 12.0 : + 4.0
Setting point w/o	out bumper spring
Rated speed rpm	: 225
CRT mma min.	: > 5.40
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 325 : 3.80 : +- 0.10
Rated speed rpm	: 375
TORQUE CONTROL Rated speed rpm rack travel man Tolerance mm	: 700 : 11.30 : ← 0.05
Rated speed rpm rack travel mm Tolerance mm	: 700 : 10.45 : + 0.05
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1500 : 12.25 : +- 0.25

Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 7.80 : + 0.10			
MEASUREMENT				
Rated speed rpm	: 500			
Pressure hPa rack travel mm Tolerance mm	: 850 : 3.00 : + 0.20			
Pressure hPa rack travel mm Tolerance mm	: 300 : 0.25 : + 0.05			
Start interlock				
Rated speed rpm Rated speed rpm	: > 100 : > 230			
Check speed 1/min Check speed 1/min	: > 80 : > 250			
FUEL DELIVERY CHARACTERISTICS				
Aneroid pressure hPa Rated speed rpm Del. quantity	: ~ : 700			
cm3/1000 strokes Tolerance	: 269.0			
cm3/1000 strokes Check tolerance	: +- 1.0			
cm3/10 00 S. Spreed	: ← 4.0			
Tolerance cm3/1000 strokes	: 10.0			
Check tolerance				

Aneroid pressure
hPa : Rated speed rpm : 700
Del. quantity
cm3/1000 strokes : 188.0
Tolerance
cm3/1000 strokes : + 1.0
Check tolerance
cm3/1000s. : +- 4.0

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.50
Tolerance mm : + 0.50
Del. quantity
cm3/1000 strokes : 150.0
Tolerance
cm3/1000 strokes : + 15.0
Check tolerance
cm3/1000s. : + 19.0

LOW IDLE

Rated speed rpm : 325 3.80 Rack travel in mm : : **←** 0.10 Tolerance mm Del. quantity cm3/1000 strokes : 23.0 Tolerance cm3/1000 strokes : \leftarrow 3.0 Check tolerance cm3/1000s. : +-6.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 07.98.97 Test oil : ISO 4113

Combination No. : 0 402 846 067

Injection pump

Pump designation : PE6P12OA32ORS8015 EP type number : 0 412 826 016

Governor

Governer design. : RQV300...1050PA1225

Soverner no. : 0 421 814 151

Cust. part No. : 11031773

: -P03 v.05/96

Customer-spec. information

Customer : VCE

Motor : TD122KAE Power KW : 243.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. $^{\circ}$ C : 40 Tolerance $^{\circ}$ C : \leftarrow 2.0

Overflow valve : 2 417 413 078

Inlet press. bar : 2.5
Tolerance bar : +- 0.1

Overflow quantity

min. l/h : 138 Tolerance l/h : + 20.0

Test nozzle holde

assembly : 1 688 901 103

Opening pressure

bar : 208.5 Tolerance bar : + 1.5 Test Lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.00 Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 11.00 Tolerance mm : ← 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.50

Check

tolerance *NW : + 0.75

Start of delivery mark

Tolerance : + 0.50

Check

tolerance *NW : + 0.75

Barrel no. : 1

BASIC SETTING

	1
Rack travel in mm : 9.30 Tolerance mm : + 0.05	Rated speed rpm : 490 guide sleeve
Dol guantity	travel mm : 4.65 Tolerance mm : + 0.25
Del. quantity cm3/1000 strokes : 236.0	Rated speed rpm : 1300
Tolerance	guide sleeve
cm3/1000 strokes : + 1.0	+ travel mm : 11.50
Andreway, and compared the state of the stat	Tolerance mm : +- 0.50
Check tolerance cm3/1000s. : +- 4.0	GUIDE SLEEVE POSITION
Spreed	dolde sceeve rostiton
Tolerance	t control lever
cm3/1000 strokes : 8.0	position degree : - 1
	+ Rated speed rpm : 1190
Check tolerance	+
cm3/1000s. : 11.0	Rack travel in mm: 9.50
	Tolerance mm : → 1.30
705	
Rated speed rpm : 325	+ FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm: 3.80	Rated speed rpm : 700
Tolerance mm : + 0.10	+ Aneroid pressure
Del. quantity	+ hPa : 1500
cm3/1000 strokes : 23.0 Tolerance	+ Del. quantity + cm3/1000 strokes : 236.0
cm3/1000 strokes : +- 3.0	Tolerance
Check tolerance	+ cm3/1000 strokes : + 1.0
$cm3/1000s.$: \leftarrow 6.0	+ Check tolerance
Spreed	+ cm3/1000s. : + 4.0
Tolerance	+ Spreed
cm3/1000 strokes : 5.0 Check tolerance	+ Tolerance + cm3/1000 strokes : 8.0
cm3/1000s. : 8.0	Check tolerance
	+ cm3/1000s. : 11.0
(B) SETTING OF INJECTION PUMP	†
WITH GOVERNOR	
	CONTROL LEVER
GUIDE SLEEVE TRAVEL	T control lever
	position degree : 61.0
Rated speed rpm : 1131	tolerance degree : +- 4.0
guide sleeve	†
travel mm : 8.61 Tolerance mm : + 0.15	control lever position degree : 122.0
Tolerance mm : +- 0.15	tolerance degree : +- 4.0
Rated speed rpm : 325	+ 1000 409 60 1 1
guide sleeve	RATED SPEED
travel mm : 2.04	+ rack travel mm : 8.30
Tolerance mm : ← 0.20	+ Rated speed rpm : 1120 + Tolerance 1/min : +- 5
Rated speed rpm : 1038	T loterance is milities.
guide sleeve	rack travel mm : 4.00
travel mm : 7.03	Rated speed rpm : 1170
Tolerance mm : + 0.25	+ Tolerance 1/min : + 15

rack travel mm : 0.50 Tolerance mm : +- 0.50 Rated speed rpm : 1260	
LOW IDLE	
control lever position degree : 64.0 tolerance degree : +- 4.0	
control lever position degree : 10.0 tolerance degree : +- 4.0	
Setting point w/out bumper spring	
Rated speed rpm : 225	
CRT mm min. : > 5.40	
Testing:	
Rated speed rpm : 325 rack travel mm : 3.80 Tolerance mm : +- 0.10	
Rated speed rpm : 375	
TORQUE CONTROL Rated speed rpm : 700 rack travel mm : 9.30 Tolerance mm : + 0.05	
ANEROID/ALTITUDE COMPENSATOR TEST	_
SETTING	
Rated speed rpm : 500 Pressure hPa : 1500 rack travel mm : 9.30 Tolerance mm : + 0.05	
Rated speed rpm : 500 Pressure hPa : - rack travel mm : 7.80 Tolerance mm : + 0.10	
MEASUREMENT	

D	500
Pressure hPa rack travel mm	: 520 : 1.30
Tolerance mm	: + 0.20
TOTOL GIFTOC HAIT	0.20
Pressure hPa	: 290
rack travel mm	: 0.25
Tolerance mm	: ← 0.05
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure	
hPa Rated speed rpm	700
Del. quantity	: 700
cm3/1000 strokes	: 188.0
Tolerance	
cm3/1000 strokes	: + 1.0
Check tolerance	
cm3/1000s.	: +- 4.0
STARTING FUEL DEL	IVERY
Rated speed rpm	: 100
rack travel mm	: 20.50
Tolerance mm	: +- 0.50
Del. quantity cm3/1000 strokes	: 150.0
Tolerance	. 150.0
cm3/1000 strokes	: +- 15.0
Check tolerance	
cm3/1000s.	: +- 19.0
	
LOW IDLE	
.	
Rated speed rpm	: 325
Rack travel in mon	3.80
Tolerance mm	: +- 0.10
Del. quantity	
cm3/1000 strokes	: 23.0
Tolerance	
cm3/1000 strokes	: ← 3.0
Check tolerance	
cm3/1000s. Spreed	: +- 6.0
opreed Tolerance	
cm3/1000 strokes	: 5.0
Check tolerance	· • • • • • • • • • • • • • • • • • • •
cm3/1000s.	: 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

Test oil

: 11.08.97 : ISO 4113

Combination No. : 0 402 846 082

Injection pump

Pump designation : PE6P12OA32ORS8051 EP type number : 0 412 826 037

Governor

Governer design. : RQV300...1050PA1225

Governer no. : 0 421 814 151

Cust. part No. : 11127056

: -P02 v.08/97

Customer-spec. information

Customer : VCE

Motor

: TD122KME

Power KW : 245.C

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C 40

Tolerance °C

Overflow valve : 2 417 413 078

2.5 Inlet press. bar :

: +- 0.1 Tolerance bar

Tolerance L/h : + 20.0

Test nozzle holde

: 1 688 901 103 assembly

Opening pressure

: 208.5 bar Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0

600 x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar: 26.0

Tolerance bar : + 1.0

Prestroke mm 4.50

: + 0.05Tolerance mm

Check

: + 0.10 tolerance mm

Rack travel in mm : 11.00

: + 0.50 Tolerance mm

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

: +- 0.50 Tolerance

Check

: +- 0.75 tolerance *NW

Start of delivery mark

Tolerance : +- 0.50

Check

tolerance 'NW : **←** 0.75

Barrel no. : 1

BASIC SETTING

	1
Rack travel in mm : 12.10	Rated speed rpm : 490
Tolerance mm : + 0.05	guide sleeve
Toterance man	travel mm : 4.65
No. 1 diantitu	+ Tolerance mm : +- 0.25
Del. quantity	Toterance min : += 0.25
cm3/1000 strokes : 258.0	1700
	+ Rated speed rpm : 1300
Tolerance	+ guide sleeve
cm3/1000 strokes : +- 1.0	+ travel mm : 11.50
	+ Tolerance mm : +- 0.50
Check tolerance	+
cm3/1000s. : +- 4.0	
	↓ GUIDE SLEEVE POSITION
Spreed	+
	+
Tolerance	+ control lever
cm3/1000 strokes : 8.0	position degree : - 1
	+ Rated speed rpm : 1190
Check tolerance	Added opeca (p.m
cm3/1000s. : 11.0	Reck trevel in mm: 8.30
(IIII) 10000. 17.59	Tolerance mm : +- 1.30
	T Total alice min.
	T
Rated speed rpm : 325	FULL LOAD DELIVERY AT FULL LOAD STOP
Rated speed rpm : 325	T FOLL LOAD DELIVERY AT FULL LOAD STOP
had been been 2.70	T Dahad mand nam . 700
Rack travel in mm: 3.60	+ Rated speed rpm : 700
Tolerance mm : + 0.10	+ Aneroid pressure
Del. quantity	+ hPa : 1500
cm3/1000 strokes : 23.0	+ Del. quantity
Tolerance	+ cm3/1000 strokes : 258.0
cm3/1000 strakes : +- 3.0	+ Tolerance
Check tolerance	+ cm3/1000 strokes : +- 1.0
cm3/1000s. : +- 6.0	+ Check tolerance
Spreed	+ cm3/1000s. : +- 4.0
Tolerance	+ Spreed
cm3/1000 strokes : 5.0	+ Tolerance
Check tolerance	+ cm3/1000 strokes : 8.0
cm3/1000s. : 8.0	+ Check tolerance
	+ cm3/1000s. : 11.0
	1
(B) SETTING OF INJECTION PUMP	
WITH GOVERNOR	
WITH GOVERNOR	CONTROL LEVER
	I CONTROL LEVER
CUIDE SIEDIE TRAVEL	t control lever
GUIDE SLEEVE TRAVEL	position degree : 63.0
Ontrod prood pop a 1171	
Rated speed rpm : 1131	tolerance degree : +- 4.0
guide sleeve	T comband loves
travel mm : 8.61	control lever
Tolerance mm : + 0.15	+ position degree : 117.0
	tolerance degree : +- 4.0
Rated speed rpm : 325	†
guide sleeve	+ RATED SPEED
travel mm : 2.04	+ rack travel mm : 11.10
Tolerance mm : + 0.20	+ Rated speed rpm : 1120
	+ Tolerance 1/min : +- 5
Rated speed rpm : 1038	+
guide sleeve	+ rack travel mm : 4.00
travel mm : 7.03	+ Rated speed rpm : 1180
Tolerance mm : + 0.25	+ Tolerance 1/min : + 15
TOTAL GROUNDS	The second secon

rack travel mm Tolerance mm Rated speed rpm	: 0.50 : ← 0.50 : 1260
LOW IDLE	
control lever position degree tolerance degree	: 65.0 : +- 4.0
control lever position degree tolerance degree	: 11.0 : + 4.0
Setting point w/o	ut bumper spring
Rated speed rpm	: 225
CRT mm min.	: > 7.00
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 325 : 3.60 : + 0.10
Rated speed rpm	: 375
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 700 : 12.10 : + 0.05
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1500 : 12.10 : + 0.05
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 10.00 : + 0.20
MEASUREMENT	

Pressure hPa rack travel mm Tolerance mm	: 640 : 1.60 : + 0.20
Pressure hPa rack travel mm Tolerance mm	: 290 : 0.25 : +- 0.05
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure	
hPa Rated speed rpm	: ~ : 700
Del. quantity cm3/1000 strokes Tolerance	: 188.0
cm3/1000 strokes Check tolerance	: +- 1.0
cm3/1000s.	: ← 4.0
STARTING FUEL DEL	IVERY
Rated speed rpm	: 100
rack travel mm Tolerance mm	: 20.50 : +- 0.50
Del. quantity cm3/1000 strokes	: 155.0
Tolerance cm3/1000 strokes	: +- 15.0
Check tolerance cm3/1000s.	: +- 19.0
LOW IDLE	
Rated speed rpm	: 325
Rack travel in mm Tolerance mm	ı: 3.60 : ← 0.10
Del. quantity	
cm3/1000 strokes Tolerance	: 23.0
cm3/1000 strokes	: + 3.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 12.08.97 : 150 4113

Combination No. : 0 403 476 148

Injection pump

Pump designation : PES6MW100/720RS1131 EP type number : 0 413 406 123

Governor

Governer design. : RSV350...1200MW0A405

Governer no. : 0 420 085 294

Cust. part No. : 0270741802

Customer-spec. information Customer : MB-NFZ : OM 366 A Motor

Power KW

: 118.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C Tolerance °C : **←** 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

: 208.5 bar Tolerance bar

Test Lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0 600 x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 31.0 Tolerance bar : + 1.0

Prestroke mm : 3.75 Tolerance mm : + 0.05 Prestroke mm

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance *NW : + 0.75

BASIC SETTING

Rated speed rpm : 1180

Rack travel in mm: 11.65 Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 89.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +-3.0

Spreed

Tolerance cm3/1000 strokes : 3.5	- Check tolerance - cm3/1000s. : 6.0
Check tolerance cm3/1000s. : 6.0	CONTROL LEVED
Rated speed rpm : 350	CONTROL LEVER control lever position degree : 107.0
-	tolerance degree : + 4.0
Rack travel in mm: 6.30	-
Tolerance mm : + 0.25	RATED SPEED
Del. quantity cm3/1000 strokes : 12.0	rack travel mm : 10.65 Rated speed rpm : 1233
Tolerance	- Tolerance 1/min : + 3
cm3/1000 strokes : +- 2.0	L Togerance Prich.
Check tolerance	rack travel mm : 4.00
cm3/1000s. : +- 4.5	Rated speed rpm : 1290
Spreed	Tolerance 1/min : +- 5
Tolerance	
cm3/1000 strokes : 3.5	rack travel num : 1.00
Check tolerance	Tolerance mm : +- 0.70 Rated speed rpm : 1400
cm3/1000s. : 5.5	- Rated speed rpm : 1400 -
(E) SETTING OF INJECTION PUMP WITH GOVERNOR	LOU TOUT
7	LOW IDLE
GUIDE SLEEVE POSITION	control lever position degree : 81.0 tolerance degree : + 4.0
control lever	
position degree : - 3	Setting point w/out bumper spring
Rated speed rpm : 800 -	Rated speed rpm : 100
Rack travel in mm: 0.65	Rated Speed Pall . 100
Tolerance mm : + 0.35	CRT mm min. : > 19.00
•	}
governor spring -	Testing:
pre-tension -	Dated and day 750
click setting x : 5.25	Rated speed rpm : 350 rack travel mm : 6.30
	rack travel mm : 6.30 Tolerance mm : +- 0.25
FULL LOAD DELIVERY AT FULL LOAD STOP	
·	rack travel mm : 2.00
Rated speed rpm : 1180 -	Rated speed rpm : 450
Aneroid pressure	Tolerance 1/min : +- 30
hPa : 800 -	<u>†</u>
Del. quantity -	TOPOLE CONTROL
cm3/1000 strokes : 89.0 - Tolerance -	TORQUE CONTROL Rated speed rpm : 1180
cm3/1000 strokes : + 1.0	rack travel mm : 11.65
cm3/1000 strokes : + 1.0 - Check tolerance -	
cm3/1000 strokes : + 1.0 - Check tolerance -	rack travel mm : 11.65 Tolerance mm : +- 0.05 Rated speed rpm : 800
cm3/1000 strokes : \(\dagger \) 1.0 - Check tolerance - cm3/1000s. : \(\dagger \) 3.0 - Spreed - Tolerance -	rack travel mm : 11.65 Tolerance mm : +- 0.05 Rated speed rpm : 800
<pre>cm3/1000 strokes : ← 1.0 Check tolerance cm3/1000s. : ← 3.0 Spreed</pre>	rack travel mm : 11.65 Tolerance mm : +- 0.05

Rated speed rpm rack travel mm Tolerance mm	
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 800 : 12.00 : + 0.10
Rated speed rpm Pressure hPa Tolerance mm	: 500 : - : + 0.10
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 350 : 1.10 : + 0.10
Pressure hPa rack travel mm Tolerance mm	: 275 : 0.65 : ← 0.10
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity	: 800 : 800
cm3/1000 strokes	: 88.0
Tolerance cm3/1000 strokes	: + 1.5
Check tolerance cm3/1000s. Spreed	: +- 4.0
Tolerance cm3/1000 strokes	: 5.0
Check tolerance cm3/1000s.	: 7.0
Aneroid pressure hPa	: -
Rated speed rpm Del. quantity	: 500
cm3/1000 strokes Tolerance	: 50.0
cm3/1000 strokes	: + 1.0

Check tolerance cm3/1000s.	: +-	3.0
STARTING FUEL DELI	VERY	74-71-44-4-4-4-4-4-4-4-4-4-4-4-4-4-4-4-4
Check hydraulic s unlocking device		
Rated speed rpm	:	100
Del. quantity cm3/1000 strokes	:	83.0
Tolerance cm3/1000 strokes	: +-	5.0
Check tolerance cm3/1000s.	: +-	8.0
LOW IDLE		
Rated speed rpm	:	350
Rack travel in mm Tolerance mm Del. quantity	: +-	6.30 0.25
cm3/1000 strokes	:	12.0
Tolerance cm3/1000 strokes	: +-	2.0
Check tolerance cm3/1000s. Spreed	: +-	4.5
Tolerance	:	3.5

: 5.5

Check tolerance cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 12.08.97 Test oil : ISO 4113

Combination No. : 0 403 476 151

Injection pump

Pump designation: PES6MW100/720RS1131

EP type number : 0 413 406 123

Governor

Governer design. : RSV350...1200MW0A405

Governer no. : 0 420 085 294

Cust. part No. : 0270742302

Customer-spec. information Customer : MB-NFZ Motor : OM 366 A Power KW : 118.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0
Tolerance bar : + 1.0

Prestroke mm : 3.75
Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.50

Check

tolerance *NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1180

Rack travel in mm : 11.65 Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 89.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance cm3/1000s. : + 3.0

Spreed

Tolerance cm3/1000 strokes : 3.5	Check tolerance cm3/1000s. : 6.0
Check tolerance - cm3/1000s. : 6.0	
	CONTROL LEVER
750	control lever
Rated speed rpm : 350	position degree : 107.0 tolerance degree : + 4.0
Rack travel in mm: 6.30	-
Tolerance mm : + 0.25	RATED SPEED
Del. quantity cm3/1000 strokes : 12.0	rack travel mm : 10.65 Rated speed rpm : 1233
Tolerance	Tolerance 1/min : +- 3
cm3/1000 strokes : + 2.0	
Check tolerance	rack travel mm : 4.00
cm3/1000s. : +- 4.5	Rated speed rpm : 1290
Spreed Tolerance	Tolerance 1/min : +- 5
cm3/1000 strokes : 3.5	rack travel mm : 1.00
Check tolerance	Tolerance mm : + 0.70
cm3/1000s. : 5.5	Rated speed rpm : 1400
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	LOW IDLE
GUIDE SLEEVE POSITION -	control lever
7	position degree : 81.0
control lever	tolerance degree : + 4.0
position degree : - 3	Setting point w/out bumper spring
Rated speed rpm : 800 -	+
- D 1 Am 11 Am 11 Am 12	Rated speed rpm : 100
Rack travel in mm : 0.65 - Tolerance mm : ← 0.35 -	CRT mm min. :> 19.00
-	}
governor spring	Testing:
pre-tension - click setting x : 5.25 -	Rated speed rpm : 350
Termination of the second of t	rack travel mm : 6.30
	Tolerance mm : +~ 0.25
FULL LOAD DELIVERY AT FULL LOAD STOP	3.00
Rated speed rpm : 1180	rack travel mm : 2.00 Rated speed rpm : 450
Aneroid pressure	Tolerance 1/min : +- 30
hPa : 800 -	
Del. quantity -	+
7/4000 - Analysis - 20 0	TODOUT CONTROL
cm3/1000 strokes : 89.0	TORQUE CONTROL Rated speed rom : 1180
cm3/1000 strokes : 89.0 - Tolerance -	Rated speed rpm : 1180
cm3/1000 strokes : 89.0 - Tolerance - cm3/1000 strokes : +- 1.0 - Check tolerance -	
<pre>cm3/1000 strokes : 89.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 3.0</pre>	Rated speed rpm : 1180 rack travel mm : 11.65 Tolerance mm : + 0.05
<pre>cm3/1000 strokes : 89.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 3.0 Spreed</pre>	Rated speed rpm : 1180 - rack travel mm : 11.65 - Tolerance mm : + 0.05 - Rated speed rpm : 800
<pre>cm3/1000 strokes : 89.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 3.0</pre>	Rated speed rpm : 1180 rack travel mm : 11.65 Tolerance mm : + 0.05

Rated speed rpm	:	1100
rack travel mm	:	11.75
Tolerance mm	: -	← 0.10

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm	:	500
Pressure hPa	:	800
rack travel mm	:	12.00
Tolerance mm	: +	-0.10

Rated speed rpm	:	500
Pressure hPa	:	
Tolerance mm	: +	- 0.10

MEASUREMENT

•		
Pressure hPa	:	350
rack travel mm	:	1.10
Tolerance mm	: +	- 0.10

Rated speed rpm : 500

Pressure hPa	:	275
rack travel mm	:	0.65
Tolerance mm	; +	- 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure hPa Rated speed rpm	:		800 800
Del. quantity cm3/1000 strokes Tolerance	:		88.0
cm3/1000 strokes Check tolerance	:	+	1.5
cm3/1000s. Spreed	:	+	4.0
Tolerance cm3/1000 strokes Check tolerance	:		5.0
cm3/1000s.	:		7.0

Aneroid pressure		
hPa	:	-
Rated speed rpm	:	500
Del. quantity		
cm3/1000 strokes	:	50.0
Tolerance		
cm3/1000 strokes	: 4	- 1.0

Check tolerance		
cm3/1000s.	; +-	3.0

STARTING FUEL DELIVERY

Check hydraulic start locking and unlocking device with 500...1000 hPa.

Rated speed rpm	:	100
Del. quantity cm3/1000 strokes	:	83.0
Tolerance cm3/1000 strokes	: +-	- 5.0
Check tolerance cm3/1000s.	: +	- 8.0

LOW IDLE

Rated speed rpm	:	350	
Rack travel in mm Tolerance mm Del. quantity	: +-	6.30 0.25	
cm3/1000 strokes	:	12.0	
Tolerance cm3/1000 strokes	: +-	2.0	
Check tolerance cm3/1000S. Spreed	: +-	4.5	
Tolerance cm3/1000 strokes	:	3.5	
Check tolerance cm3/1000S.	:	5.5	

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 03.07.97 Test oil : ISO 4113

Combination No. : 0 402 736 907

Injection pump

Pump designation : PES6P12DA12ORS7432 EP type number : 0 412 726 967

Governor

Governer design. : RQV450...1100PA1334K

Governer no. : 0 421 815 549

Cust. part No. : 3931940

Customer—spec. information Customer : CDC Motor : 6CTA-A Power KW : 224.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0 Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 103

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5

Test Lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter : 3.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm : 4.40
Tolerance mm : + 0.03
Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50

Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.30

Check

tolerance °NW : +- 0.75

Start of delivery blocking

*NW after s.o.d. : 8.00 Tolerance : +- 0.50

Check

tolerance *NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 14.25 Tolerance mm : + 0.05

M12

1	guide sleeve
Del. quantity cm3/1000 strokes : 227.0	travel mm : 13.50 Tolerance mm : +- 0.50
Tolerance cm3/1000 strokes : +- 1.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance cm3/1000s. : +- 4.0	Rated speed rpm : 1100 Aneroid pressure
Spreed	hPa : 900 Del. quantity cm3/1000 strokes : 227.0
Tolerance cm3/1000 strokes : 5.0	Tolerance cm3/1000 strokes : 227.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance
Check tolerance cm3/1000s. : 9.0	cm3/1000s. : +- 4.0 Spreed Tolerance
	cm3/1000 strokes : 5.0 Check tolerance
Rated speed rpm : 450	cm3/1000s. : 9.0
Rack travel in mm: 6.40 Tolerance mm: : + 0.20	
Del. quantity cm3/1000 strokes : 31.0	CONTROL LEVER
Tolerance + 3.0 + Check tolerance + + + + + + + + + + + + + + + + + + +	control lever position degree : 117.0 tolerance degree : +- 4.0
cm3/1000s. : + 5.0	tolerance degree : +- 4.0 RATED SPEED
Tolerance cm3/1000 strokes : 8.0	rack travel mm : 13.20 Rated speed rpm : 1170
Check tolerance cm3/1000s. : 12.0	Tolerance 1/min : +- 15
(B) SETTING OF INJECTION PUMP	rack travel mm : 8.00 Rated speed rpm : 1250 Tolerance 1/min : +- 5
WITH GOVERNOR	rack travel mm : 0.50
GUIDE SLEEVE TRAVEL	Tolerance mm : +- 0.50 Rated speed rpm : 1350
Rated speed rpm : 1162 guide sleeve	· ·
travel mm : 7.49 Tolerance mm : +- 0.15	LOW IDLE
Rated speed rpm : 450 guide sleeve	· control lever
travel mm : 1.33 Tolerance mm : + 0.20	position degree : 76.5 tolerance degree : +- 4.0
Rated speed rpm : 860 guide sleeve	Control lever difference Grad: 40.5
travel mm : 4.55 Tolerance mm : + 0.25	tolerance degree : +- 6.0
Rated speed rpm : 1560	Setting point w/out bumper spring
+	Rated speed rpm : 375

		+ Check
CRT mm min.	: > 7.70	speed 1/min : < 400
Testing:		FUEL DELTUEN CHARACTERICTICS
Datad amond upp	. /50	FUEL DELIVERY CHARACTERISTICS
Rated speed rpm	• 43U	T
rack travel mm Tolerance mm	0.40	Anamai I anamai
rolerance mm	: +- 0.20	+ Aneroid pressure
0-4-1		hPa : 900
Rated speed rpm	: 525	+ Rated speed rpm : 750
		+ Del. quantity
	····	cm3/1000 strokes : 218.0
TORQUE CONTROL	4400	+ Tolerance
Rated speed rpm rack travel mm	: 1100	+ cm3/1000 strokes : + 3.0
rack travel mm Tolerance mm	: 14.25	+ Check tolerance
Tolerance mm	: ← 0.05	+ cm3/1000s. : +- 6.0
		† Spreed
Rated speed rpm	: 750	+ Tolerance
rack travel mm	: 13.55	+ cm3/1000 strokes : 8.0
Tolerance mm	: +- 0.10	+ Check tolerance
		+ cm3/1000s. : 12.0
Rated speed rpm rack travel mm	: 500	+
rack travel mm	: 13.60	
Tolerance mm	: ← 0.20	+ Aneroid pressur:
		+ hPa : -
		Rated speed rpm : 1000
ANEROID/ALTITUDE		+ Del. quantity
COMPENSATOR TEST		+ cm3/1000 strokes : 183.5
		→ Tolerance
		+ cm3/1000 strokes : +- 1.0
SETTING		- Check tolerance
		+ cm3/1000s. : + 3.0
Rated speed rpm	: 1100	1
Pressure hPa	900	1
, , , , , , , , , , , , , , , , , , ,	, ,,,,	
Rated speed rpm	: 1000	+ STARTING FUEL DELIVERY
Pressure hPa		
rack travel mm	12.80	Rated speed rpm : 100
Pressure hPa rack travel mm Tolerance mm	: +- 0.20	+ rack travel mm : 21.00
. 0 . 0		+ Tolerance mm : + 0.50
MEASUREMENT		Del. quantity
TENOOREI ICIVI		+ cm3/1000 strokes : 156.0
Rated speed rpm	: 1100	+ Tolerance
nated speed ipin	. 1100	+ cm3/1000 strokes : + 20.0
Pressure hPa	: 400	+ Check tolerance
rack travel mm	: 13.80	+ cm3/1000s. : + 25.0
Tolerance mm	: ← 0.20	I (110003: 25:0
roterance in	0.20	${ m I}$
Pressure hPa	: 300	I
rack travel mm	: 13.40	I
Tolerance mm		LOW IDLE
TOTERATICE MIN	. +- 0.20	T COM INCE
		Rated speed rpm : 450
Chart datast - al-		Rated speed rpm : 450
Start interlock		Dook traval in my 4 /0
Ontard and all	. > 400	+ Rack travel in mm : 6.40
Rated speed rpm		+ Tolerance mm : +- 0.20
Rated speed rpm	: < 390	+ Del. quantity
		+ cm3/1000 strokes : 31.0
Check		+ Tolerance
speed 1/min	: > 80	+ cm3/1000 strokes : $+$ 3.0

Check tolerance
Lin3/1000S. : +- 5.0
Spreed
Tolerance
cm3/1000 strokes : 8.0
Check tolerance
cm3/1000S. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 15.08.97 Test oil : ISO 4113

Combination No. : 0 402 736 911

Injection pump

Pump designation : PES6P120A120RS7370 EP type number : 0 412 726 934

Governor

Governer design. : RQV400...1250PA1212

: -2K

: -2K Governer no. : 0 421 815 528

Cust. part No. : 3931537

Customer-spec. information Customer : CDC Motor : 6BTA-A Power KW : 135.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. *C : 40
Tolerance *C : + 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 103 assembly

Opening pressure

: 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 17.0 Tolerance bar : + 1.0

Prestroke mm : 2.50 Tolerance mm : + 0.05 Check tolerance mm : +- 0.10

Rack travel in mm: 10.50 Tolerance mm : ← 0.50

Firing order : 1-5-3-6-2-: 4

: 0-60-120-180-240 Phasing

: -300

Start of delivery blocking

*NW after s.o.d. : 7.00 Tolerance : \leftarrow 0.50

tolerance "NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm: 13.85

Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes	: 170.0	Tolerance mm : +- 0.50
Tolerance cm3/1000 strokes	: + 1.0	FULL LOAD DELIVERY AT FULL LOAD STOP
		Rated speed rpm : 1250
Check tolerance cm3/1000s.	: ← 4.0 ‡	Aneroid pressure hPa : 1200
	·	Del. quantity
Spreed	+	cm3/1000 strokes : 170.0
T. l	†	Tolerance
Tolerance cm3/1000 strokes	: 8.0	cm3/1000 strokes : +- 1.0 Check tolerance
CMD/ 1000 Strokes	. 0.0	cm3/1000s. : +- 4.0
Check tolerance		Spreed
cm3/1 000 S.	: 13.0 +	Tolerance
		cm3/1000 strokes : 8.0
	Ī	Check tolerance cm3/1000s. : 13.0
Rated speed rpm	: 460	
. ,	+	·
Rack travel in mm		CONTROL LEVED
	: ← 0.20 †	CONTROL LEVER
Del. quantity cm3/1000 strokes	: 13.5	control lever
Tolerance	. 13:3	position degree : 114.0
cm3/1000 strokes	: +- 3.0 +	tolerance degree : +- 6.0
Check tolerance	+	•
	: 	RATED SPEED
Spreed	1	rack travel mm : 12.80 Rated speed rpm : 1320
Tolerarice cm3/1000 strokes	: 3.0	Tolerance 1/min : +- 25
Check tolerance		Total arise 17 mm
	: 5.0	rack travel mm : 4.00
	+	Rated speed rpm : 1580
(D) OFTENS OF THE	ECTION CUMP	Tolerance 1/min : +- 5
(B) SETTING OF INJ	ECTION POMP	rack travel mm : 0.50
WITH GOVERNOR	+	Tolerance mm : +- 0.50
		Rated speed rpm : 1700
GUIDE SLEEVE TRAVE	L †	
Rated speed rpm	: 1412	
guide sleeve	· 1716	
travel mm	: 9.88	LOW IDLE
Tolerance mm	: +- 0.15	
Dadad sasad	. /20	control lever
Rated speed rpm guide sleeve	: 420 ‡	control lever position degree : 63.5
travel mm	: 1.56	tolerance degree : +- 6.0
	· + 0.20 +	-
	+	Control lever difference
Manage Phase Per	: 1020 +	Grad : 50.5
guide sleeve	: 5.97	tolerance degree : +- 6.0
travel mm Tolerance mm	: + 0.25	Setting point w/out bumper spring
iotei ditre iim		and the man and animal obtains
Rated speed rpm	: 2000 +	Rated speed rpm : 300
guide sleeve	+	
travel mm	: 13.50 +	CRT mm min. :> 7.20

Testing:

Rated speed rpm 460 5.40 rack travel mm Tolerance mm : +- 0.20

Rated speed rpm : 425

TORQUE CONTROL

Rated speed rpm 1250 13.85 rack travel mm : **←** 0.05 Tolerance mm

800 Rated speed rpm 11.80 rack travel mm Tolerance mm : **←** 0.10

1000 Rated speed rpm 12.50 rack travel mm Tolerance mm : +- 0.20

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm 1250 Pressure hPa 1200

1250 Rated speed rpm Pressure hPa 9.40 rack travel mm Tolerance mm : **←** 0.20

MEASUREMENT

: 1250 Rated speed rpm

440 Pressure hPa rack travel mm 12.55 Tolerance mm : +- 0.30

Pressure hPa 265 10.80 rack travel mm : + 0.20 Tolerance mm

Start interlock

100 Rated speed rpm :> 315 Rated speed rpm : <

Check

80 speed 1/min : > Check

325 speed 1/min : <

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

1200 Rated speed rpm 800

Del. quantity

cm3/1000 strokes : 123.5

Tolerance

cm3/1000 strokes : +-3.0

Check tolerance cm3/1600s.

6.0 Spreed

Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. 13.0

Aneroid pressure

hPa 1250 Rated speed rpm

Del. quantity cm3/1000 strokes :

96.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +-4.0

STARTING FUEL DELIVERY

Rated speed rpm 100 11.70 rack travel mm : Tolerance mm : **←** 0.50

Del. quantity

cm3/1000 strokes : 157.0

Tolerance

cm3/1000 strokes : +- 20.0Check tolerance cm3/1000s.: +- 25.0

LOW IDLE

Rated speed rpm : 460

5.40 Rack travel in mm : : +- 0.20 Tolerance mm

Del. quantity

cm3/1000 strokes : 13.5

Tolerance

cm3/1000 strokes : +- 3.0Check tolerance

cm3/1000s.: +-5.0

Spreed
Tolerance
cm3/1000 strokes : 3.0

Check tolerance cm3/1000s. 5.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 15.08.97 : ISO 4113

Combination No. : 0 402 736 912

Injection pump

Pump designation : PES6P120A120RS7370 EP type number : 0 412 726 934

Governor

Governer design. : RQV400...1250PA1212

: -3K

: 0 421 815 529 Governer no.

cust. part No. : 3931539

Customer-spec. information Customer : CDC Motor : 6BTA-A Power KW : 134.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C 40 Tolerance °C

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 103 assembly

Opening pressure

208.5 Tolerance bar : +- 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter : 3.0 x Length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 17.0 Tolerance bar : ← 1.0

Prestroke mm : +- 0.05 Tolerance mm

Check

: **←** 0.10 tolerance mm

Rack travel in mm : 10.50 Tolerance mm: \leftarrow 1.50

: 1-5- 3- 6- 2-Firing order

: 4

Phasing : 0-60-120-180-240

: -300

Start of delivery blocking

*NW after s.o.d. : 7.00 Tolerance : \leftarrow 0.50

Check

tolerance NW : \leftarrow 0.75

: 1 Barrel no.

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm: 13.85

Tolerance mm : \leftarrow 0.05

Del. quantity cm3/1000 strokes : 170.0	Tolerance mm : + 0.50
Tolerance cm3/1000 strokes : +- 1.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance cm3/1000s. : +- 4.0	Rated speed rpm : 1250 Aneroid pressure hPa : 1200
Spreed	Del. quantity cm3/1000 strokes : 170.6 Tolerance
Tolerance cm3/1000 strokes : 8.0	cm3/1000 strokes : + 1.0 Check tolerance
Check tolerance cm3/1000s. : 13.0	
	cm3/1000 strokes : 8.0 Check tolerance
Rated speed rpm : 460	+ cm3/1009s. : 13.0
Rack travel in mm : 5.40 Tolerance mm : +- 0.20 Del. quantity	CONTROL LEVER
cm3/1000 strokes : 13.5 Tolerance	control lever position degree : 114.0
<pre>cm3/1000 strokes : +- 3.0 Check tolerance cm3/1000s. : +- 5.0</pre>	tolerance degree : +- 6.0 + RATED SPEED
Spreed Tolerance cm3/1000 strokes : 3.0	+ rack travel mm : 12.80 + Rated speed rpm : 1320 + Tolerance 1/min : + 25
Check tolerance cm3/1000s. : 5.0	rack travel mm : 4.00
(B) SETTING OF INJECTION PUMP	+ Rated speed rpm : 1580 + Tolerance 1/min : +- 5
WITH GOVERNOR	rack travel mm : 0.50 Tolerance mm : +- 0.50 Rated speed rpm : 1700
GUIDE SLEEVE TRAVEL	T Rated speed (piii . 1700
Rated speed rpm : 1412 guide sleeve travel mm : 9.88	LOW IDLE
Tolerance mm : +- 0.15	1 20% 1022
Rated speed rpm : 420 guide sleeve travel mm : 1.56	<pre>control lever position degree : 62.5 tolerance degree : +- 6.0</pre>
Tolerance mm : +- 0.20	Control lever difference
Rated speed rpm : 1020 guide sleeve travel mm : 5.97	Grad : 51.5 tolerance degree : +- 6.0
Tolerance mm : ← 0.25	Setting point w/out bumper spring
Rated speed rpm : 2000 guide sleeve travel mm : 13.50	Rated speed rpm : 300 CRT mm min. :> 7.20
travel mm : 13.50	T. CVI (BRI III-131)

Testing:

Rated speed rpm	:	460
rack travel mm	:	5.40
Tolerance mm	; +-	0.20

Rated speed rpm : 425

TORQUE CONTROL		
Rated speed rpm	:	1250
الأحمال مناهدا	_	47 00

Rated speed rpm	:	800
rack travel mm	:	11.80
Tolerance mm	: +	- 0.10

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm	:	1250
Pressure hPa	:	1200

Rated speed rpm	:	1250
Pressure hPa	:	-
rack travel mm	:	9.10
Tolerance mm	; +	- 0.20

MEASUREMENT

Rated	speed	COM	•	1250
Varen	Speed	(LAII	•	1270

Pressure hPa	:	440
rack travel mm	:	11.70
Tolerance mm	: +	- 0.30

Pressure hPa	:	265
rack travel mm	:	10.00
Tolerance mm	: +	- 0.20

Start interlock

Rated	speed	rpm	: >	100
	speed		: <	315

Check

CHECK			
speed	1/min	: >	80
Check			
	~	_	700

speed 1/min : < 325

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure hPa Rated speed rpm	:	1200 800
Del. quantity cm3/1000 strokes	:	123.5
Tolerance cm3/1000 strokes	:	+- 3.0
Check tolerance cm3/1000s.	:	 6.0
Spreed Tolerance cm3/1000 strokes	:	8.0
Check tolerance cm3/1000s.	:	13.0

Aneroid	pressure

hPa	:		_
Rated speed rpm	:	1	250
Del. quantity			
cm3/1000 strokes	:		90.0
Tolerance			
cm3/1000 strokes	:	+	1.0
Check tolerance			
cm3/1000s.	:	+-	4.0

STARTING FUEL DELIVERY

Rated speed rpm	:		100 11.70
Tolerance mm	:	+-	0.50
Del. quantity	•	·	0.50
cm3/1000 strokes	:		157.0
Tolerance			
cm3/1000 strokes	:	+-	20.0
Check tolerance			
cm3/1000S.	:	+	25.0

LOW IDLE

Rated speed rpm	:		460
Rack travel in mm Tolerance mm Del. quantity	:	+	5.40 0.20
cm3/1000 strokes	:		13.5
Tolerance cm3/1000 strokes	:	+-	3.0
Check tolerance cm3/1000s.	:	+	5.0

Spreed

Tolerance cm3/1000 strokes : 3.0

Check tolerance cm3/1000s. : 5.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 15.08.97 Test oil : ISO 4113

Combination No. : 0 402 736 913

Injection pumpo

Pump designation : PES6P120A120RS7369 EP type number : 0 412 726 935

Governor

Governer design. : RQV400...1400PA1211

: -1K Governer no. : 0 421 815 530

Cust. part No. : 3931538

Customer-spec. information Customer : CDC
Motor : 6BTA-A
Power KW : 160.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

40 temp. °C Tolerance °C : + 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0 Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 103

Opening pressure

: 208.5 bar Tolerance bar : + 1.5

Test Lines : 1 680 750 015

Octside diameter : 6.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm : 3.00
Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 12.00 Tolerance mm : \leftarrow 0.50

Firing order : 1-5- 3- 6- 2-

: 4

: 0-60-120-180-240 Phasing

: -300

Start of delivery blocking

*NW after s.o.d. : 6.75 Tolerance : \leftarrow 0.50

Check

: +- 0.75 tolerance *NW

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm : 14.45 Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes	: 180.0	- Tolerance mm	: +- 0.25
Talannaa	-	- Rated speed rpm	: 512
Tolerance cm3/1000 strokes	10	- guide sleeve - travel mm	: 3.37
CMS/ 1000 Strokes		- Tolerance mm	: +- 0.25
Check tolerance			4000
cm3/1000s.	: +- 4.0	 Rated speed rpm guide sleeve 	: 1000
Spreed		- travel mm	: 5.53
	-	- Tolerance mm	: + 0.25
Tolerance	+	_	
cm3/1000 strokes	: 8.0	- Rated speed rpm	: 2130
Check tolerance		- guide sleeve - travel mm	: 13.50
cm3/1000s.	: 13.0	- Tolerance mm:	: + 0.50
		L	. 0.55
	1	FIG. LOAD DELYME	DV AT 5000 1000
Rated speed rpm	: 435	- FULL LOAD DELIVE	RY AT FULL LOAD STOP
TOUGH SPECIAL PART		- Rated speed rpm	: 1300
Rack travel in mm	: 5.80	- Aneroid pressure	
Tolerance mm	: ← 0.20	- hPa	: 1500
Del. quantity	-	- Del. quantity	
cm3/1000 strokes	: 13.0	cm3/1000 strokes	: 180.0
Tolerance	4	- Tolerance	
cm3/1000 strokes	: ← 3.0	- cm3/1000 strokes	: +- 1.0
Check tolerance	+	- Check tolerance	
cm3/1000s.	: +- 5.0 -	- cm3/1000s.	: ← 4.0
Spreed	+	- Spreed	
Tolerance		- Tolerance	
cm3/1000 strokes	: 3.0	cm3/1000 strokes	: 8.0
Check tolerance		Check tolerance	47.0
cm3/1000s.	: 5.0	- cm3/1000s.	: 13.0
(D) OFFTTING OF TH	IFCTTON NUMB		
(B) SETTING OF IN	JECTION PUMP	- CONTROL LEVER	
432.11 04 62(t) to (t)	-	-	
		- control lever	
GUIDE SLEEVE TRAVI	EL -	position degree	
	, <u> </u>	tolerance degree	: +- 6.0
Rated speed rpm	: 1410	- -	
guide sleeve	4	RATED SPEED	
travel mm	: 8.73	- rack travel mm	
Tolerance mm	: ← 0.25 -	- Rated speed rpm	
~	400	Tolerance 1/min	: ← 25
Rated speed rpm	: 400 -		5 50
guide steeve	2.04	- rack travel mm	
travel mm	: 2.01	- Rated speed rpm	
Tolerance mm	: + 0.25	Tolerance 1/min	: +- 5
Rated speed rpm	: 1488	rack travel mm	: 0.50
guide steeve	. 1700	- Tolerance mm	: +- 0.50
travel mm	: 9.53	- Rated speed rpm	
Tolerance mm	: + 0.25	-:	. 1015
TOTAL GIVE HER			
Rated speed rpm	: 462 -		
guide sleeve	-		
travel mm	: 2.91	- LOW IDLE	

M25

<pre>control lever position degree : tolerance degree : +-</pre>	68.0 6.0
Control lever differen Grad : tolerance degree : +-	50.0
Setting point w/out bu	mper spring
Rated speed rpm :	300
CRT mm min. :>	8.70
Testing:	
	435 5.80 0.20
Rated speed rpm :	425
	1300 14.45 0.05
Rated speed rpm : rack travel mm : Tolerance mm : +-	800 11.80 0.20
	1100 13.30 0.20
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
	1300 1500
Pressure hPa : rack travel mm :	1300 - 9.60 0.20
MEASUREMENT	
Rated speed rpm :	1300
rack travel mm :	965 13.10 0.30

Pressure hPa rack travel mm Tolerance mm	: 390 : 10.80 : +- 0.20		
Start interlock			
Rated speed rpm Rated speed rpm	: > 100 : < 340		
Check speed 1/min Check	: > 80		
speed 1/min	: < 350		
FUEL DELIVERY CHA	RACTERISTICS		
Aneroid pressure hPa Rated speed rpm	: 1500 : 800		
Del. quantity cm3/1000 strokes	: 118.0		
Tolerance cm3/1000 strokes Check tolerance	; ← 3.0		
cm3/1000s. Spreed	: +- 6.0		
Tolerance cm3/1000 strokes	: 8.0		
Check tolerance cm3/1000s.	: 13.0		
Aneroid pressure			
hPa Rated speed rpm Del. quantity	: – : 1300		
cm3/1000 strokes Tolerance	: 79.5		
cm3/1000 strokes Check tolerance	: +- 2.0		
cm3/1000s.	: +- 4.0		
STARTING FUEL DELIVERY			
Rated speed rpm rack travel mm Tolerance mm	: 100 : 12.80 : + 0.50		
Del. quantity cm3/1000 strokes	: 157.0		
Tolerance cm3/1000 strokes Check tolerance	: ← 20.0		
cm3/1000s.	: +- 25.0		

LOW IDLE

Rated speed rpm 435 Rack travel in mm : 5.80 : **←** 0.20 Tolerance mm Del. quantity cm3/1000 strokes : 13.0 Tolerance 3.0 cm3/1000 strokes : +-Check tolerance : +-5.0 cm3/1000s. Spreed Tolerance 3.0 cm3/1000 strokes : Check tolerance 5.0 cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 11.09.95 : ISO 4113

Combination No. : 0 402 776 818

Injection pump

Pump designation : PES6P12DA72DRS7382 EP type number : 0 412 726 943

Governor

Governer design. : RSV400...1100P0A547

: -5

Governer no.

: 0 421 833 481

Cust. part No. : RE62686

Customer-spec. information Customer : DEERE

Motor

: 6081 HF001

Power KW

: 224.0

TEST BENCH REQUIREMENTS

Inlet line

: 4.2

Test oil inlet

temp. °C

40

Tolerance °C

Overflow valve : 2 417 413 079

Inlet press. bar : 2.0

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

bar

208.5

Tolerance bar

: **←** 1.5

Test lines

: 1 680 750 015

Outside diameter : 6.0

x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 17.0

Tolerance bar : +- 1.0

Prestroke mm 3.60

Tolerance mm : **←** 0.05

Check

tolerance mm : **←** 0.10

Rack travel in mm : 10.50

Tolerance mm : + 1.50

: 1-5-3-6-2-Firing order

: 0-60-120-180-240 Phasing

: -300

Start of delivery mark

*NW after s.o.d. : 9.75

: **←** 0.50 Tolerance

Check

tolerance *NW : **←** 0.75

Barrel no. : 1

Beginning of delivery differende

and maximum rack

travel

14.00

Difference * CS : 2.50

BASIC SETTING

Rated speed rpm : 1100

M28

_	<u> </u>
Rack travel in mm: 12.10 - Tolerance mm: + 0.05 -	FULL LOAD DELIVERY AT FULL LOAD STOP
Del. quantity cm3/1000 strokes : 202.5	Rated speed rpm : 1100 Aneroid pressure hPa : 1300
Tolerance - cm3/1000 strokes : + 1.0 -	Del. quantity cm3/1000 strokes : 202.5 Tolerance
Check tolerance cm3/1000s. : +- 4.0	cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0
Spreed	Spreed Tolerance
Tolerance - 5.0 - 5.0	cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0
Check tolerance cm3/1000s. : 9.0 -	
-	CONTROL LEVER
Rated speed rpm : 400	control lever position degree : 96.0
Rack travel in mm: 5.50 - Tolerance mm: : + 0.10 -	tolerance degree : +- 4.0
Del. quantity - cm3/1000 strokes : 20.5 - Tolerance - cm3/1000 strokes : +- 3.0	+ RATED SPEED - rack travel mm : 11.10 - Rated speed rpm : 1155 - Tolerance 1/min : + 5
Check tolerance	+
cm3/1000s. : + 5.0 Spreed Tolerance	+ rack travel mm : 4.00 + Rated speed rpm : 1210 + Tolerance 1/min : + 5
cm3/1000 strokes : 8.0 - Check tolerance cm3/1000S. : 12.0 -	rack travel mm : 0.85 Tolerance mm : +- 0.55
	Rated speed rpm : 1300
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	rack travel mm : 4.00 Rated speed rpm : 1215 Tolerance 1/min : +- 15
GUIDE SLEEVE POSITION	‡
	LOW IDLE
control lever 3	+
Rated speed rpm : 800	control lever position degree : 73.0
Rack travel in mm : 0.50 Tolerance mm : + 0.20	tolerance degree : +- 4.0
governor spring	Setting point w/out bumper spring
pre-tension click setting x : 4.00	Rated speed rpm : 400 rack travel mm : 5.00 Tolerance mm : + 0.10

Rated speed rpm : 100 CRT mm min. : > 19.00 Testing: 400 Rated speed rpm 5.50 rack travel mm : + 0.10 Tolerance mm TORQUE CONTROL 1100 Rated speed rpm : rack travel mm 12.10 Tolerance mm : **←** 0.05 Rated speed rpm 700 rack travel mm 12.85 Tolerance mm : **←** 0.10 ANEROID/ALTITUDE COMPENSATOR TEST SETTING 500 Rated speed rpm : Pressure hPa 1300 500 Rated speed rpm Pressure hPa 9.35 rack travel mm : Tolerance mm : + 0.10**MEASUREMENT** Rated speed rpm 500 900 Pressure hPa 12.00 rack travel mm : **←** 0.20 Tolerance mm 450 Pressure hPa 10.20 rack travel mm : **←** 0.05 Tolerance mm FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa 1300 Rated speed rpm 700 Del. quantity cm3/1000 strokes : 224.5 Tolerance cm3/1000 strokes : \leftarrow 3.0

Check tolerance : +- 6.0 cm3/1000s. Aneroid pressure hPa 500 Rated speed rpm : Del. quantity cm3/1000 strokes : 103.0 Tolerance cm3/1000 strokes : \leftarrow 2.0 Check tolerance cm3/1000s. : +- 4.0 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel am : 20.50 : **←** 0.50 Tolerance mm Del. quantity cm3/1000 strokes : 105.0 Tolerance cm3/1000 strokes : +- 20.0Check tolerance cm3/1000s. : +- 25.0 LOW IDLE Rated speed rpm : 400 Rack travel in mm: 5,50 Tolerance mm : \leftarrow 0.10 Del. quantity cm3/1000 strokes : 20.5 Tolerance cm3/1000 strokes : \leftarrow 3.0 Check tolerance cm3/1000s. : +-5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s.12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 14.11.95 : ISO 4113

Combination No. : 0 402 776 820

Injection pump

Pump designation : PES6P120A720RS7382

EP type number : 0 412 726 943

Governor

Governer design. : RSV400...110CP0A547

Governer no.

: 0 421 833 488

Cust. part No. : RE62648

Customer-spec. information : DEERE

Customer

Motor

: 6081 AF001

Power KW

: 205.0

TEST BENCH REQUIREMENTS

Inlet line

: 4.2

Test oil inlet

temp. °C

Tolerance °C

Overflow valve : 2 417 413 079

Inlet press. bar : 2.0

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

bar

208.5

Tolerance bar

: + 1.5

Test lines

: 1 680 750 015

Outside diameter : 6.0

x inside diameter : 3.0

x length mm

600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : +-1.0

Prestroke mm 3.60 : + 0.05Tolerance mm

Check

tolerance mm : **←** 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

: 1-5-3-6-2-Firing order

: 0-60-120-180-240 Phasing

: -300

Start of delivery mark

*NW after s.o.d. : 7.50 Tolerance : + 0.50

Check

tolerance 'NW : + - 0.75

Barrel no.

: 1

Beginning of delivery differende

and maximum rack

travel

14.00

Difference ° CS :

2.50

BASIC SETTING

Rated speed rpm : 1100

N03

+	Aneroid pressure
Rack travel in mm: 11.70	hPa : 1300
Tolerance mm : + 0.05	Del. quantity
No.	cm3/1000 strokes : 191.5 Tolerance
Del. quantity + cm3/1000 strokes : 191.5 +	cm3/1000 strokes : +- 1.0
(115) 1000 strokes : 191.3	Check tolerance
Tolerance	cm3/1000s. : +- 4.0
cm3/1000 strokes : + 1.0	Spreed
This root of ones it is not a second	Tolerance
Check tolerance	cm3/1000 strokes : 5.0
cm3/1000s. : +- 4.0	Check tolerance
+	cm3/1000s. : 9.0
Spreed	
Tolerance	CONTROL LEVED
cm3/1000 strokes : 5.0	CONTROL LEVER
Check tolerance	control lever
cm3/1000s. : 9.0	position degree : 95.0
CIID/ 10003	tolerance degree : +- 4.0
	total dillo degli co
1	RATED SPEED
Rated speed rpm : 400	rack travel mm : 10.70
+	Rated speed rpm : 1155
Rack travel in mm: 5.50	Tolerance 1/min : +- 5
Tolerance mm : + 0.10 +	
Del. quantity +	rack travel mm : 4.00
cm3/1000 strokes : 20.5	Rated speed rpm : 1210
Tolerance	Tolerance 1/min : +- 5
cm3/1000 strokes : +- 3.0 +	0.85
Check tolerance + 5.0 + 5.0	rack travel mm : 0.85 Tolerance mm : +- 0.55
cm3/1000s. : +- 5.0 +- 5.0 +- 5.0	Rated speed rpm : 1280
Tolerance +	Nated Speed Pall : 1200
cm3/1000 strokes : 8.0	rack travel mm : 4.00
Check tolerance	Rated speed rpm : 1225
cm3/1000s. : 12.0	Tolerance 1/min : +- 15
+	
+	
(B) SETTING OF INJECTION PUMP	
WITH GOVERNOR +	
†	LOW IDLE
GUIDE SLEEVE POSITION	control lever
GOIDE SCEEVE POSITION	position degree : 72.0
1	tolerance degree : + 4.0
control lever	
position degree : -3	Setting point w/out bumper spring
+	
governor spring	Rated speed rpm : 400
pre-tension +	rack travel mm : 5.00
click setting x : 3.50 +	Tolerance mm : + 0.10
†	0.4.1
	Rated speed rpm : 100
FULL LOAD DELIVERY AT FULL LOAD STOP	CDT 10 00
Detect around and a 1100	CRT mm min. : > 19.00
Rated speed rpm : 1100	Testing:
Ť	resung.

Rated speed rpm	:	400
rack travel mm	:	5.50
Tolerance mm	: +-	0.10

TORQUE CONTROL

Rated speed rpm : 1100 rack travel mm : 11.70 Tolerance mm : + 0.05

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500 Pressure hPa : 1300

500 Rated speed rpm : Pressure hPa : rack travel mm : 8.70 Tolerance mm : \leftarrow 0.10

MEASUREMENT

Rated speed rpm : 500

Pressure hPa : 740 rack travel mm : 11.10 Tolerance mm : + 0.20

Pressure hPa : 380 rack travel mm : 9.50 Tolerance mm : + 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 92.5

Tolerance

cm3/1000 strokes : \leftarrow 2.0 Check tolerance

: **←** 4.0 cm3/1000s.

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm: $\leftarrow 0.50$ Del. quantity

cm3/1000 strokes : 105.0

Tolerance

cm3/1000 strokes : \leftarrow 20.0

Check tolerance

cm3/1000s. : +- 25.0

LOW IDLE

Rated speed rpm : 400

Rack travel in mm: 5.50 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 20.5 Tolerance cm3/1000 strokes : \leftarrow 3.0 Check tolerance : **←** 5.0 cm3/1000s.Spreed

Tolerance cm3/1000 strokes :

8.0 Check tolerance cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 14.11.95 Test oil : ISO 4113

Combination No. : 0 402 776 825

Injection pump

Pump designation : PES6P120A720RS7382

EP type number : 0 412 726 943

Governor

Governer design. : RSV400...1100P0A574

: -?

Governer no. : 0 421 833 496

Cust. part No. : RE63768

Customer-spec. information
Customer : DEERE
Motor : 6081 AF001
Power KW : 205.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 2 417 413 079

Inlet press. bar : 2.0

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter : 3.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm : 3.60 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Start of delivery mark

*NW after s.o.d. : 7.50 Tolerance : + 0.50

Check

tolerance *NW : +- 0.75

Barrel no. : 1

Beginning of delivery differende

and maximum rack

travel : 14.00 Difference * CS : 2.50

BASIC SETTING

Rated speed rpm : 1100

		+ Aneroid pre
Rack travel in mm		† hPa
Tolerance mm	: +- 0.05	+ Del. quanti + cm3/1000 st
Del. quantity		_ + tms/1000 st
cm3/1000 strokes	: 191.5	cm3/1000 st
CIID/ 1000 SCIORES	. 171.3	Check toler
Tolerance		- + cm3/1000s.
cm3/1000 strokes	: +- 1.0	Spreed
		Tolerance
Check tolerance		+ cm3/1000 st
cm3/1000S.	: 	+ Check toler
Spreed		+
		+
Tolerance		+
cm3/1000 strokes	: 5.0	+ CONTROL LEV
		_ †
Check tolerance		+ control lev
cm3/1000S.	: 9.0	+ position de
		† tolerance d
		T DATES 53-53
Dated second	: 400	+ RATED SPEED + rack travel
Rated speed rpm	: 400	•
Doo's denoted to an	. 5.50	+ Rated speed
Rack travel in mm	: + 0.10	† Tolerance 1
Tolerance mm	: 0.10	T anak annual
Del. quantity	. 20 5	+ rack travel
cm3/1000 strokes	: 20.5	+ Rated speed + Tolerance 1
Tolerance cm3/1000 strokes	: - 3.0	T locerance i
Check tolerance	3.0	T rack travel
cm3/1000S.	: +- 5.0	Tolerance m
Spreed	5.0	+ Rated speed
Tolerance		I wated speed
cm3/1000 strokes	: 8.0	rack travel
Check tolerance	. 0.0	+ Rated speed
cm3/1000s.	: 12.0	+ Tolerance 1
CIID/ 10000.		1 roter dilec 1
		1
(B) SETTING OF IN	JECTION PUMP	1
WITH GOVERNOR	- 	
		LOW IDLE
		+
		- +
GUIDE SLEEVE POSI	TION	+ control lev
		position de
		+ tolerance d
control lever		+
position degree	: - 3	+ Setting poi
-		+
governor spring		+ Rated speed
pre-tension		+ rack travel
click setting x	: 3.50	† Tolerance m
		+
		 Rated speed
FULL LOAD DELIVERY	Y AT FULL LOAD STOP	†
	4400	+ CRT mm min.
Rated speed rpm	: 1100	†
		→ Testina:

Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 1300 : 191.5 : + 1.0 : + 4.0 : 5.0 : 9.0
CONTROL LEVER	
control lever position degree tolerance degree	: 95.0 : + 4.0
RATED SPEED rack travel mm Rated speed rpm Tolerance 1/min	: 10.70 : 1155 : ← 5
rack travel mm Rated speed rpm Tolerance 1/min	: 4.00 : 1210 : + 5
rack travel mm Tolerance mm Rated speed rpm	: 0.85 : ← 0.55 : 1280
rack travel mm Rated speed rpm Tolerance 1/min	: 4.00 : 1225 : + 15
LOW IDLE	
control lever	: 72.0

position degree : 72.0 tolerance degree : + 4.0

Setting point w/out bumper spring

Rated speed rpm : 400 rack travel mm : 5.00 Tolerance mm : + 0.10

Rated speed rpm : 100

CRT mm min. : > 19.00

+ Testing:

Rated speed rpm	:	400
rack travel mm	:	5.50
Tolerance mm	: +	- 0.10

TORQUE	CONTROL

Rated speed rpm	:	1100
rack travel mm	;	11.70
Tolerance mm	:	+- C.C5

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm	:	500
Pressure hPa	:	1300

Rated speed rpm	:	500
Pressure hPa	:	-
rack travel mm	:	8.70
Tolerance mm	: +-	- 0.10

MEASUREMENT

Rated speed	rpm	:	500
-------------	-----	---	-----

Pressure hPa	:	740
rack travel mm	:	11.10
Tolerance mm	; +	- 0.20

Pressure hPa	:		380
rack travel mm	:		9.50
Tolerance mm	:		0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure		
hPa	:	-
Rated speed rpm	:	500
Del. quantity		
cm3/1000 strokes	:	92.5
Tolerance		
cm3/1000 strokes	• +	2.0

Check tolerance		
cm3/1000S.	: +-	4.0

STARTING FUEL DELIVERY

Rated speed rpm	:	100
rack travel mm	:	20.50
Tolerance mm	: +	- 0.50

Del. quantity

cm3/1000 strokes : 105.0

Tolerance

cm3/1000 strokes : \leftarrow 20.0

Check tolerance

cm3/1000s. : \leftarrow 25.0

LOW IDLE

Rated speed rpm : 400

Rack travel in mm: 5.50 Tolerance mm: + 0.10

Del. quantity

cm3/1000 strokes : 20.5

Tolerance

cm3/1000 strokes : + 3.0

Check tolerance

cm3/1000s. : +- 5.0

Spreed

Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 12.09.95 Test oil : ISO 4113

Combination No. : 0 402 776 826

Injection pump

Pump designation : PES6P120A720RS7382

EP type number : 0 412 726 943

Governor

Governer design. : RSV400...1100P0A547

Governer no.

: 0 421 833 498

Cust, part No. : RE63769

Customer-spec. information

Customer

: DEERE

Motor

: 6081 HF001

Power KW

: 224.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C

Tolerance °C

Overflow valve : 2 417 413 079

Inlet press. bar : 2.0

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

208.5

Tolerance bar : + 1.5

Test Lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm 3.60 : +- 0.05 Tolerance mm

Check

: ← 0.10 tolerance mm

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Start of delivery mark

*NW after s.o.d. : 9.75 Tolerance : + 0.50

Check

: **←** 0.75 tolerance *NW

Barrel no.

: 1

Beginning of delivery differende

and maximum rack

14.00 travel

Difference * CS : 2.50

BASIC SETTING

Rated speed rpm : 1100

N09

Rack travel in mm : 12.10 Tolerance mm : + 0.05
Del. quantity cm3/1000 strokes : 202.5
Tolerance cm3/1000 strokes : + 1.0
Check tolerance cm3/1000s. : +- 4.0
Spreed
Tolerance cm3/1000 strokes : 5.0
Check tolerance cm3/1000S. : 9.0
Rated speed rpm : 400
Rack travel in mm: 5.50 Tolerance mm: + 0.10
Del. quantity cm3/1000 strokes : 20.5
Tolerance cm3/1000 strokes : +- 3.0
Check tolerance cm3/1000s. : + 5.0
Spreed Tolerance
cm3/1000 strokes : 8.0 Check tolerance
cm3/1000s. : 12.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR
GUIDE SLEEVE POSITION
control lever position degree : - 3
governor spring
pre-tension click setting x : 4.00
FULL LOAD DELIVERY AT FULL LOAD STOP
Rated speed rpm : 1100

Aneroid pressure hPa	: 1300
Del. quantity cm3/1000 strokes Tolerance	: 202.5
cm3/1000 strokes Check tolerance	: +- 1.0
cm3/1000s. Spreed	: +- 4.0
Tolerance cm3/1000 strokes	: 5.0
Check tolerance cm3/1000s.	: 9.0
CONTROL LEVER	
control lever position degree tolerance degree	: 96.0 : ← 4.0
RATED SPEED rack travel mm Rated speed rpm Tolerance 1/min	: 11.10 : 1155 : +- 5
rack travel mm Rated speed rpm Tolerance 1/min	: 4.00 : 1210 : +- 5
rack travel mm Tolerance mm Rated speed rpm	: 0.85 : ← 0.55 : 1300
rack travel mm Rated speed rpm Tolerance 1/min	: 4.00 : 1215 : +- 15

LOW IDLE

control lever
position degree : 73.0
tolerance degree : +- 4.0

Setting point w/out bumper spring

Rated speed rpm : 400 rack travel mm : 5.00 Tolerance mm : + 0.10

Rated speed rpm : 100

CRT mm min. : > 19.00

Testing:

Rated speed rpm rack travel mm Tolerance mm	: 400 : 5.50 : + 0.10
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 1100 : 12.10 : ← 0.05
Rated speed rpm rack travel mm Tolerance mm	: 700 : 12.85 : + 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa	: 500 : 1300
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 9.35 : +- 0.10
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 900 : 12.00 : + 0.20
Pressure hPa rack travel mm Tolerance mm	: 450 : 10.20 : ← 0.05
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity	: 1300 : 700
cm3/1000 strokes Tolerance	: 224.5
cm3/1000 strokes Check tolerance cm3/1000S.	: ← 3.0 : ← 6.0
Aneroid pressure hPa	: -

N11

Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 103.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : +- 4.0 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : + 0.50 Del. quantity cm3/1000 strokes : 105.0 Tolerance cm3/1000 server.
Check tolerance : +- 25.0 LOW IDLE Rated speed rpm : 400 Rack travel in mm: 5.50 Tolerance mm : \leftarrow 0.10 Del. quantity cm3/1000 strokes : 20.5 Tolerance cm3/1000 strokes : +- 3.0Check tolerance cm3/1000s. : \leftarrow 5.0 Spreed

End of test specification sheet

cm3/1000 strokes : 8.0

: 12.0

Tolerance

cm3/1000S.

Check tolerance

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 09.01.96 Edition : ISO 4113 Test oil

Combination No. : 0 402 776 827

Injection punc

Pump designation : PES6P12OA72ORS7399 EP type number : 0 412 726 951

Governor

Governer design. : RSV475...1000POA547

: -9

Governer no. : 0 421 833 506

Cust. part No. : RE65507

Customer-spec. information

Customer : DEERE
Motor : 6101 AT
Power KW : 221.0 : 6101 AT010

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C Tolerance °C : + 2.0

Overflow valve : 2 417 413 079

Inlet press. bar : 2.0

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

: 208.5 Tolerance bar : +- 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar: 17.0 Tolerance bar : + 1.0

Prestroke mm : 3.60 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50 Tolerance mm : \leftarrow 1.50

Firing order : 1-5- 3- 6- 2-

Phasing : 0-60-120-180-240

: -300

Start of delivery mark

*NW after s.o.d. : 7.00 Tolerance : + 0.50

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm: 13.45

Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 235.5

	No.
Talanana	Del. quantity cm3/1000 strokes : 235.5
Tolerance + 1.0 +	Tolerance : 253.5
CHD/1000 SCIOKES . 1 1.0	cm3/1000 strokes : +- 1.0
Check tolerance	Check tolerance
cm3/1000s. : +- 4.0	cm3/1000s. : +- 4.0
CIIIS7 180000: 4.0	Spreed
Spreed	Tolerance
opi eca	cm3/1000 strokes : 5.0
Tolerance	Check tolerance
cm3/1000 strokes : 5.0	cm3/1000s. : 9.0
+	
Check tolerance	
cm3/1000s. : 9.0	
	CONTROL LEVER
+	
+	control lever
Rated speed rpm : 525 +	position degree : 90.0
	tolerance degree : +- 4.0
Rack travel in mm: 5.60	n:The Ameri
Tolerance mm : +- 0.10	RATED SPEED
Del. quantity	rack travel mm : 12.40
cm3/1000 strokes : 21.5	Rated speed rpm : 1060 Tolerance 1/min : +- 5
Tolerance + 3.0 +	Tolerance 1/min : +- 5
Check tolerance	rack travel mm : 4.00
cm3/1000s. : + 5.0	Rated speed rpm : 1125
Spreed	Tolerance 1/min : + 5
Tolerance	Totel ance Tright
cm3/1000 strokes : 8.0	rack travel mm : 0.85
Check tolerance	Tolerance mm : +- 0.55
cm3/1600s. : 12.0 +	Rated speed rpm : 1200
+	
+	rack travel mm : 4.00
(B) SETTING OF INJECTION PUMP	Rated speed rpm : 1145
WITH GOVERNOR +	Tolerance 1/min : + 15
+	
+	
GUIDE SLEEVE POSITION +	LOUIS
†	LOW IDLE
T	
control lever	control lever
position degree : -3 + Rated speed rpm : 300 +	position degree : 74.0
rated speed rpm . Out	tolerance degree : +- 4.0
Rack travel in mm: 0.50	toter and degree 4.0
Tolerance mm : + 0.20	Setting point w/out bumper spring
Total article man	occerng point would builder opining
governor spring	Rated speed rpm : 525
pre-tension +	rack travel mm : 5.10
click setting x : 3.25	rack travel mm : 5.10 Tolerance mm : +- 0.10
+	
	Rated speed rpm : 100
FULL LOAD DELIVERY AT FULL LOAD STOP	
+	CRT mm min. : > 19.00
Rated speed rpm : 1000 +	
Aneroid pressure +	Testing:
hPa : 1600 +	505
+	Rated speed rpm : 525

rack travel mm : 5.60 Tolerance mm : + 0.10 TORQUE CONTROL Rated speed rpm : 1000 rack travel mm : 13.45 Tolerance mm : +- 0.05 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 500 Pressure hPa : 1600 Rated speed rpm : 500 Pressure hPa : -rack travel mm : 9.75
Tolerance mm : +- 0.20 MEASUREMENT Rated speed rpm : 500 Pressure hPa : 1000 rack travel mm : 12.40 Tolerance mm : +- 0.20 Pressure hPa : 590 rack travel mm : 10.60

Check tolerance cm3/1000s. : +- 25.0 LOW IDLE Rated speed rpm : 525 Rack travel in mm : 5.60 Tolerance mm : \leftarrow 0.10 Del. quantity cm3/1000 strokes : 21.5 Tolerance cm3/1000 strokes : +- 3.0 Check tolerance cm3/1000s. : +- 5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 End of test specification sheet

Tolerance

cm3/1000 strokes : +- 20.0

FUEL DELIVERY CHARACTERISTICS

Tolerance mm : +- 0.05

Aneroid pressure hPa Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 101.5 Tolerance

cm3/1000 strokes : +- 2.0

Check tolerance

cm3/1000s. : +- 4.0

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : + 0.50 Del. quantity

cm3/1000 strokes : 105.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 25.04.96 : ISO 4113

Combination No. : 0 402 776 828

Injection pump

Pump designation : PES6P120A720RS7403 EP type number : 0 412 726 952

Governor

Governer design. : RSV400...1050P0A547

: -10

Governer no.

: 0 421 833 507

Cust. part No. : RE64818

Customer-spec. information Customer

: DEERE

Motor

: 6101 HF001

Power KW

: 280.0

TEST BENCH REQUIREMENTS

Inlet line

: 4.2

Test oil inlet

temp. °C

40

Tolerance °C

: +- 2.0

Overflow valve : 2 417 413 079

Inlet press. bar : 2.0

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

bar

208.5

Tolerance bar : + 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

N15

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 17.0

Tolerance bar : +- 1.0

Prestroke mm

3.60

Tolerance mm

: + 0.05

Check

tolerance mm

: + 0.10

Rack travel in mm: 10.50

Tolerance m_{ii} : \leftarrow 1.50

Firing order

: 1-5- 3-6-2-

Phasing

: 0-60-120-180-240

: -30C

Start of delivery mark

*NW after s.o.d. : 9.50

Tolerance

: + 0.50

Check

tolerance *NW

: **←** 0.75

Barrel no.

: 1

Beginning of delivery differende

and maximum rack

travel

14.00

Difference * CS : 3.75

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm: 13.65 Tolerance mm: + 0.05 Del. quantity cm3/1000 strokes: 247.0 Tolerance cm3/1000 strokes: + 1.0 Check tolerance cm3/1000s: + 4.0	Aneroid pressure hPa : 1800 Del. quantity cm3/1000 strokes : 247.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance
Spreed	cm3/1000s. : 9.0
+	
Tolerance cm3/1000 strokes : 5.0	CONTROL LEVER
Check tolerance cm3/1000s. : 9.0	control lever position degree : 92.0 tolerance degree : +- 4.0
Rated speed rpm : 400	RATED SPEED rack travel mm : 12.65 Rated speed rpm : 1100 Tolerance 1/min : +- 5
Tolerance mm : + 0.10	
Del. quantity + cm3/1000 strokes : 30.0 +	rack travel mm : 4.00 Rated speed rpm : 1165
Tolerance +	Tolerance 1/min : + 5
cm3/1000 strokes : + 3.0 + Check tolerance	rack travel mm : 0.85
cm3/1000s. : +- 5.0 +- 5.0	Tolerance mm : + 0.55 Rated speed rpm : 1250
Tolerance + cm3/1000 strokes : 8.0 +	rack travel mm : 4.00
Check tolerance	Rated speed rpm : 1175 Tolerance 1/min : +- 15
cm3/1000s. : 12.0	Tolerance 1/min : +- 15
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	LOW IDLE
Į	LOW TOLE
GUIDE SLEEVE POSITION	control lever position degree : 71.0 tolerance degree : +- 4.0
control lever position degree : -3	Setting point w/out bumper spring
governor spring pre-tension click setting x : 3.25	Rated speed rpm : 400 rack travel mm : 5.50 Tolerance mm : +- 0.10
FILL LOAD DELTHERY AT FILL LOAD STOR	Rated speed rpm : 100
FULL LOAD DELIVERY AT FULL LOAD STOP	CRT mm min. : > 19.00
Rated speed rpm : 1050	Testing:

Rated speed rpm rack travel mm Tolerance mm	: 400 : 6.00 : + 0.10
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 1050 : 13.65 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 800 : 14.10 : + 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa	: 500 : 1800
Rated speed rom Pressure hPa rack travel mm Tolerence mm	: 500 : - : 9.50 : + 0.20
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 1110 : 12.95 : + 0.20
Pressure hPa rack travel mm Tolerance mm	: 610 : 10.65 : + 0.05
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity	: 1800 : 800
cm3/1000 strokes Tolerance	: 272.0
cm3/1000 strokes Check tolerance cm3/1000s.	: ← 3.0 : ← 6.0
Aneroid pressure hPa	: -

Rated speed rpm	:		500	
Del. quantity cm3/1000 strokes	:		109.5	
Tolerance cm3/1000 strokes Check tolerance	:	+-	2.0	
cm3/1000s.	:	+-	4.0	
OTANTALO FUEL ACIA				
STARTING FUEL DELI	LVE	ΚY		
Rated speed rpm rack travel mm	:		100 21.00 0.50	
Tolerance mm Del. quantity	:	-	0.50	
cm3/1000 strokes Tolerance	:		105.0	
cm3/1000 strokes	:	+-	20.0	
Check tolerance cm3/1000s.	:		25.0	
LOW IDLE				
Rated speed rpm	;		400	
Rack travel in mm	:		6.00	
Rack travel in mm Tolerance mm		+-	6.00 0.10	
Tolerance mm Del. quantity cm3/1000 strokes	:	+-		
Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	:	+-	0.10	
Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	:		0.10 30.0	
Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	:		0.10 30.0 3.0	
Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance	•		0.10 30.0 3.0 5.0	
Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance	•		0.10 30.0 3.0 5.0	

End of test specification sheet

N17

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 14.08.97 Test oil : ISO 4113

Combination No. : 0 402 796 206

Injection pump

Pump designation : PES6H120/720RS1007

: -1

EP type number : 0 412 726 209

Governor

Governer design. : RE33

Governer no. : 0 421 890 366

Cust. part No. : 309 4348

Customer—spec. information Customer : CUMMINS Motor : QST30 Power KW : 783.0

TEST BENCH REQUIREMENTS

Inlet line : EHAB

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 082

Inlet press. bar : 3.0

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0

x length mm : 600

REMARKS

Pump-specific values in Section (B) must be observed!

(A) INJECTION PUMP SETTINGS

No basic setting.

Setting of constant delivery

under Section C.

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke imm : 7.60 Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : + 0.50

Prestroke mm : 9.95 Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

Start of delivery blocking

Tolerance : \leftarrow 0.50

Check

tolerance *NW : +- 0.75

Barrel no.	:	1		
(B) POSITIONER TE Warm-up time: 3 m n=600 min-1, Uact	inutes	at V		
TESTING & SETTING POSITION	RACK	TRAVEL	SENSOR	
Engine speed min-	1:	0		
Setting point (P, R and H pump)				
Uact V CRY mm Tolerance mm Check tolerance mm	: : +/- : +/-	0.05		

(P, R and H pump)					
Uact V CRT mm Tolerance mm Check tolerance mm	:	+/-	13. 0.	.00 .05	
Check value (P, R and H pump)					
Uact V CRT mm Tolerance mm Check tolerance mm		+/-			
Setting point (M pump)					
Uact V CRT mm Tolerance mm Check tolerance mm		+/-	12. 0.		
Check value					

tolerance mm :	+/- 0.30
Setting point (M pump)	
Check	3.100 12.50 +/- 0.05 +/- 0.10
Check value (M pump)	
	1.700 5.50 +/- 0.25 +/- 0.30
Stop position	
	Value with ised adjusting magnet and control rod in stop position.

CRT mm Tolerance mm Check tolerance mm	: 0.75 : +/- 0.25 : +/- 0.35
ENGINE-SPEED SENS (All P and R pump H and M pumps)	s not
Test with control in stop position	rod
Engine speed min- Amplitude V Tolerance V Check	: 1.4 : +/- 0.6
	: +/- 1.20
Engine speed min- Difference Amplitude to	1: 600
Amplitude V	: max.1.4
(C) INJECTION PUM	P WITH POSITIONER
TEST POINT V1 Rated speed rpm	P WITH POSITIONER : 1050 : 3.315
TEST POINT V1 Rated speed rpm Uact V Del. quantity cm3/1000 strokes	: 1050 : 3.315
TEST POINT V1 Rated speed rpm Uact V Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: 1050 : 3.315 : 358.0
TEST POINT V1 Rated speed rpm Uact V Del. quantity cm3/1000 strokes Tolerance	: 1050 : 3.315 : 358.0
TEST POINT V1 Rated speed rpm Uact V Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes	: 1050 : 3.315 : 358.0 : + 1.0 : + 4.0
TEST POINT V1 Rated speed rpm Uact V Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance	: 1050 : 3.315 : 358.0 : + 1.0 : + 4.0 : 5.0 : 9.0
TEST POINT V1 Rated speed rpm Uact V Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 1050 : 3.315 : 358.0 : + 1.0 : + 4.0 : 5.0 : 9.0
TEST POINT V1 Rated speed rpm Uact V Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s. FUEL DELIVERY CHA Rated speed rpm Uact V Del. quantity cm3/1000 strokes	: 1050 : 3.315 : 358.0 : + 1.0 : + 4.0 : 5.0 : 9.0 RACTERISTICS : 750 : 3.350
TEST POINT V1 Rated speed rpm Uact V Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s. FUEL DELIVERY CHA Rated speed rpm Uact V Del. quantity	: 1050 : 3.315 : 358.0 : + 1.0 : + 4.0 : 5.0 : 9.0 RACTERISTICS : 750 : 3.350

Rated speed rpm	:	750
Uact V	:	3.350
Del. quantity cm3/1000 strokes Tolerance	:	386.0
cm3/1000 strokes	: +-	3.0
Check tolerance cm3/1000s.	: +-	6.0
TEST POINT 11		

Rated speed rpm	:	300
Uact V	:	1.400
Tolerance Volt	: +-	0.060

Check tolerance

Volt : + 0.060

Del. quantity cm3/1000 strokes : 38.0

Tolerance

cm3/1000 strokes : +-3.0

Spreed

Tolerance

8.0 cm3/1000 strokes :

Check tolerance

cm3/1000s. 12.0

STARTING FUEL DELIVERY

100 Rated speed rom Uact V : Del. quantity cm3/1000 strokes : 2.450

255.0

Check tolerance

cm3/1000s. : +- 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 14.08.97

Test oil

: ISO 4113

Combination No. : 0 402 796 207

Injection pump

Pump designation : PES6H120/320RS1008

: -1

EP type number

: 0 412 726 208

Governor

Governer design. : RE33

Governer no.

: 0 421 890 367

Cust. part No. : 309 4347

Customer-spec. information Customer : CUMMINS Motor : QST30 Power KW : 783.0

TEST BENCH REQUIREMENTS

Inlet line

: EHAB

Test oil inlet

temp. °C

Tolerance °C

2.0

Overflow valve

: 2 417 413 082

Inlet press. bar : 3.0
Tolerance bar : + 0.1

Test nozzle holde

assembly

: 1 688 901 105

Opening pressure

bar

208.5

Tolerance bar

: + 1.5

Test Lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter :

3.0

x length mm

600

REMARKS

Pump-specific values

in Section (B) must be observed!

(A) INJECTION PUMP SETTINGS

No basic setting.

Setting of constant delivery

under Section C.

BEGINNING OF DELIVERY

Test pressure bar :

Tolerance bar : + 1.0

Prestroke mm 7.60

Tolerance mm : + - 0.05

Check

: + 0.10tolerance mm

Rack travel in mm: 10.50

Tolerance mm : \leftarrow 0.50

9.95 Prestroke mm

Tolerance mm

: +- 0.05

Check

tolerance mm

: **←** 0.10

Firing order

: 1-5- 3- 6- 2-

: 4

: 0-60-120-180-240 Phasing

: -300

: + - 0.50Tolerance

Check

tolerance *NW

: + - 0.75

Start of delivery blocking

*NW after s.o.d. :

25.00

Tolerance : **←** 0.50 Check tolerance 'NW : +- 0.75 : 1 Barrel no. (B) POSITIONER TESTING Warm-up time: 3 minutes at n=600 min-1, Uact = 2.5 V TESTING & SETTING RACK TRAVEL SENSOR POSITION Engine speed min-1: 0 Setting point (P, R and H pump) Uact V 3.100 : CRT mm 13.00 Tolerance mm : +/- 0.05 Check tolerance mm : +/- 0.10 Check value (P, R and H pump) 1,700 Uact V CRT mm 6.15 Tolerance mm : +/- 0.25 Check tolerance mm : +/- 0.30Setting point (M pump) 3.100 Uact V 12.50 CRT mm : +/- 0.05 Tolerance mm Check : +/- 0.10 tolerance mm Check value (M pump) 1.700 Uact V 5.50 CRT mm Tolerance mm : +/- 0.25 Check : +/- 0.30 tolerance mm Stop position

: Value with

deenergised adjusting magnet and control rod in stop position.

0.75 CRT mm : +/~ 0.25 Tolerance mm

Check

: +/- 0.35 tolerance mm

ENGINE-SPEED SENSOR (All P and R pumps not H and M pumps)

Test with control rod in stop position

Engine speed min-1: 60 Amplitude V 1.4 Tolerance V : +/- 0.6 Check

tolerance V : +/- 1.20

Engine speed min-1: 600

Difference Amplitude to

Amplitude V : max.1.4

(C) INJECTION PUMP WITH POSITIONER

TEST POINT V1

1050 Rated speed rpm : Uact V 3.315

Del. quantity

cm3/1000 strokes : 358.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +-4.0

Spreed

Tolerance

cm3/1000 strokes : 5.0

Check tolerance

cm3/1000s.9.0

FUEL DELIVERY CHARACTERISTICS

750 Rated speed rpm Uact V 3.350

Del. quantity

cm3/1000 strokes : 386.0

Tolerance

cm3/1000 strokes : +- 3.0

Check tolerance

cm3/1000s.: +-6.0

TEST POINT L1

Uact V

Rated speed rpm 300 1.400 Uact V Tolerance Volt : +- 0.060 Check tolerance Volt : **←** 0.060 Del. quantity cm3/1000 strokes : 38.0 Tolerance cm3/1000 strokes : +-3.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance 12.0 cm3/1000s.

STARTING FUEL DELIVERY

Rated speed rpm : 100
Uact V : 2.450
Del. quaritity
cm3/1000 strokes : 255.0
Check tolerance
cm3/1000s. : + 12.0

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 25.07.97 Test oil : ISO 4113

Combination No. : 0 402 796 812

Injection pump

Pump designation : PES6P129A720RS7315

EP type number : 0 412 726 902

Governor

Governer design. : RE30

Governer no. : 0 421 890 017

Cust. part No. : RE 57373

Customer—spec. information Customer : DEERE Motor : 6081 Power KW : 205.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 077

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 103

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

Pump-specific values in Section (B) must be observed!

(A) INJECTION PUMP SETTINGS No basic setting. Setting of constant delivery

under Section C.

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

(B) POSITIONER TESTING Warm-up time: 3 minutes at n=600 min-1, Uact = 2.5 V

TESTING & SETTING RACK TRAVEL SENSOR POSITION

Engine speed min-1: 0

Setting point (P, R and H pump)

Uact V : 3.100 CRT mm : 13.00 Tolerance mm : +/- 0.05

Check

tolerance mm : +/- 0.10

Check value (P, R and H pump)

Uact V : 1.700

CRT mm Tolerance mm Check	: 6.15 : +/- 0.25	
tolerance mm	: +/- 0.30	
Setting point (M pump)		
Uact V CRT min Tolerance mm Check	: 3.100 : 12.50 : +/- 0.05	
tolerance mm	: +/- 0.10	
Check value (M pump)		
Uact V CRT mm Tolerance mm	: 1.700 : 5.50 : +/- 0.25	
Check tolerance mm	: +/- 0.30	
Stop position		
Uact V	: Value with	
Geerie	rgised adjusting magnet and control rod in	
CRT mm Tolerance mm	stop position. : 0.75 : +/- 0.25	
Check tolerance mm	: +/- 0.35	
ENGINE-SPEED SENSOR (All P and R pumps not H and M pumps)		
Test with control in stop position	rod	
Engine speed min- Amplitude V Tolerance V Check	1: 60 : 1.4 : +/- 0.6	
tolerance V	: +/- 1.20	
Engine speed min- Difference Amplitude to	1: 600	
Amplitude V	: max.1.4	
(C) INJECTION PUM	P WITH POSITIONER	

Rated speed rpm	: 700
Uact V	: 2.940
Del. quantity	
cm3/1000 strokes	: 237.0
Tolerance	
cm3/1000 strokes	: 3.0
Check tolerance	
cm3/1000S.	: ← 6.0
Spreed	
Tolerance	
cm3/1000 strokes	: 8.0
Check tolerance cm3/1000s.	: 12.0
UID/ (UUU).	: 12.0
TEST POINT L1	
Rated speed rpm	: 450
Uact V	: 1.590
Tolerance Volt	: ← 0.060
Check tolerance	0.075
Volt	: ← 0.060
Del. quantity cm3/1000 strokes	: 26.0
Tolerance	: 26.0
cm3/1000 strokes	: ← 3.0
Spreed	
Tolerance	
cm3/1000 strokes	: 6.0
Check tolerance	
cm3/1000s.	: 10.0
STARTING FUEL DEL	IVERY
Rated speed rpm	: 100
Uact V Del. quantity	: 4.600
Del. quantity	. 145.0
cm3/1000 strokes	: 115.0
Tolerance cm3/1000 strokes	: ← 20.0
Check tolerance	
cm3/1000s.	: +- 25.0

End of test specification sheet

FUEL DELIVERY CHARACTERISTICS

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 25.07.97 Test oil : ISO 4113

Combination No. : 0 402 796 817

Injection pump

Pump designation : FES6F120A720RS7405

EP type number : 0 412 726 954

Governor

Governer design. : RE30

Governer no. : 0 421 890 037

Cust. part No. : RE 64862

Customer-spec. information Customer : DEERE : 6101AF001 Motor Power KW : 242.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C Tolerance °C : +- 2.0

Overflow valve : 2 417 413 077

Inlet press. bar : 2.0 Tolerance bar : +- 0.1

Test nozzle holde

: 1 688 901 103 assembly

Opening pressure

208.5 Tolerance bar : +- 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0 x inside diameter : 3.0 x length mm : 600

REMARKS

Pump-specific values in Section (B) must be observed!

(A) INJECTION PUMP SETTINGS No basic setting. Setting of constant delivery under Section C.

BEGINNING OF DELIVERY

Test pressure bar: 17.0 Tolerance bar : + 1.0

: 3.60 Prestroke mm : +- 0.05 Tolerance mm Check

tolerance mm : **←** 0.10

Rack travel in mm: 10.50 Tolerance mm : \leftarrow 0.50

: 1-5-3-6-2-Firing order

Phasing : 0-60-120-180-240

: -300

: **←** 0.50 Tolerance

Check

: +- 0.75 tolerance 'NW

Start of delivery mark

*NW after s.o.d. : 7.50 : +- 0.50 Tolerance Check

tolerance *NW

: +- 0.75

Barrel no. : 1

Beginning of delivery differende

and maximum rack

travel 15.00 Difference * CS : 2.50

(B) POSITIONER TESTING Warm-up time: 3 minutes at n=600 min-1, Uact = 2.5 V

TESTING & SETTING RACK TRAVEL SENSOR **POSITION**

Engine speed min-1:

Setting point (P, R and H pump)

3.100 Uact V : 13.00 CRT mm : +/- 0.05 Tolerance mm

Check

: +/~ 0.10 tolerance mm

Check value (P, R and H pump)

: 1.700 : 6.15 Uact V 6.15 CRT mm : +/- 0.25 Tolerance mm

Check

: +/- 0.30 tolerance mm

Setting point (M pump)

3.100 Uact V 12.50 CRT mm : +/- 0.05 Tolerance mm

Check

: +/- 0.10 tolerance mm

Check value (qmuq M)

: 1.700 Uact V 5.50 CRT mm : +/- 0.25 Tolerance mm

Check

: +/- 0.30 tolerance mm

Stop position

: Value with Uact V

deenergised adjusting magnet

and control rod in stop position.

0.75 CRT ann

Tolerance mm : \pm +/- 0.25

Check

: +/- 0.35tolerance mm

ENGINE-SPEED SENSOR (All P and R pumps not H and M pumps)

Test with control rod in stop position

Engine speed min-1: 60 Amplitude V : Tolerance V : 1.4 : +/- 0.6

Check

tolerance V : +/- 1.20

Engine speed min-1: 600

Difference Amplitude to

Amplitude V : max.1.4

(C) INJECTION PUMP WITH POSITIONER

TEST POINT V1

Rated speed rpm : 1050 3.030 Uact V

Del. quantity

cm3/1000 strokes : 213.0

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Check tolerance

cm3/1000s. : +-

Spreed

Tolerance

cm3/1000 strokes : 5.0

Check tolerance

cm3/1000S. 9.0 FUEL DELIVERY CHARACTERISTICS

Rated speed rpm 700 Uact V 3.120

Del. quantity

cm3/1000 strokes : 237.0

Tolerance

cm3/1000 strokes : +- 3.0

Check tolerance

cm3/1000s. : +-6.0

Spreed Tolerance

cm3/1000 strokes : 8.0

Check tolerance

12.0 cm3/1000s.

TEST POINT L1

Rated speed rpm 450 1.740 Uact V Tolerance Volt : + 0.060Check tolerance Volt : + 0.060 Del. quantity cm3/1000 strokes : 26.0 Tolerance cm3/1000 strokes : +-3.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. 10.0

STARTING FUEL DELIVERY

Rated speed rpm : 100
Usct V : 4.550
Del. quantity
cm3/1000 strokes : 120.0
Tolerance
cm3/1000 strokes : + 20.0
Check tolerance
cm3/1000s. : + 25.0